

## Food Habits Changes and their Impact on Young Adults During COVID-19 Lockdown in Sri Lanka

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### Abstract

Globally, the COVID-19 pandemic has brought about significant changes in many aspects of life. Nutrition is one important aspect that has been impacted both positively and negatively. Pandemic mitigation strategies restricted the movement of people, disrupting food production, distribution, and accessibility. On the other hand, the quantity and the quality of nutrition were also altered considerably. Young adults are vulnerable to multiple changes, including nutrition. It has been a timely requirement to study these changes during challenging situations, and the findings can be utilized to introduce nutritional guidelines during pandemic periods and nutritional recovery guidelines during post-pandemic periods. The study explores alterations in dietary habits and lifestyle patterns among Sri Lankan young adults during the COVID-19 lockdown period. Utilizing a descriptive cross-sectional design, data were collected from 118 participants aged 18-30 through an online questionnaire. The study revealed decreased consumption of vegetables, fruits, and chocolates, accompanied by higher levels of water intake and more frequent dinners. Physical activity levels declined significantly, while body weight and sleep duration increased. The research highlights the lockdown's multifaceted impact on young adults' health, emphasizing the need for targeted nutritional and physical activity guidelines during such crises and even during post-pandemic periods.

**Keywords:** Nutrition; Young adults; COVID-19; Lock down; Sri Lanka

### Introduction

COVID-19, first identified in Wuhan, China, in late 2019, rapidly escalated into a global health emergency. By July 2020, more than 12 million confirmed cases and over 550,000 deaths had been reported worldwide. (WHO, 2020). To mitigate its spread, governments worldwide enforced lockdowns starting in March 2020, restricting movement and banning social gatherings. COVID-19 is caused by SARS-CoV-2, a zoonotic virus from the Coronaviridae family, previously responsible for the 2003 SARS outbreak (Saif, 2004; WHO, 2020). The disease was officially named COVID-19 by the WHO on February 11, 2020, and declared a pandemic shortly after as cases exceeded 118,000 across 114 countries (Saxena, 2020).

Sri Lanka, known both as a regional economic hub and a tourist hotspot, recorded its first COVID-19 case on January 27, 2020, in a traveller from China. The first locally transmitted case was identified on March 11 in a tour guide who had contact with visitors from Italy. (Epidemiology Unit, 2020). Sri Lanka's response

was swift, implementing 14-day quarantines for returnees and a robust testing regime. Passive and active surveillance measures included testing symptomatic individuals and their close contacts to ensure effective containment. By April 2020, the majority of cases were traced to returning expatriates, with minimal evidence of community transmission recorded until November 2020.

The restrictions imposed during lockdowns brought about considerable changes in daily life, including decreased physical activity, greater sedentary behaviour, disruptions in sleep, and modifications in smoking habits, ultimately harming overall health. Eating habits shifted as access to fresh food diminished, prompting reliance on processed, calorie-dense, and nutrient-poor foods (Di Renzo, 2020; Hobbs, 2020). Stress and boredom, exacerbated by unemployment and media reports, fuelled emotional overeating and cravings for high-energy foods, compounding adverse health outcomes (Feather, 1997; Moynihan, 2015; Penaforte, 2019). This situation underscores the importance of targeted interventions to address lifestyle and dietary challenges during prolonged quarantine.

The literature indicates that isolation and quarantine during the COVID-19 lockdown negatively impacted health behaviours, particularly physical activity and eating habits. The limitations imposed on physical activity during restrictions (Pinto et al., 2020) were associated with mental health issues, including stress, anxiety, and boredom, which in turn intensified cravings for energy-rich comfort foods (Epel, 2007; Konttinen, 2010; Havermans, 2015). Social isolation has been linked to binge eating and a higher risk of eating disorders (Mason, 2016; Levine, 2012).

An international survey revealed unhealthier eating habits, partly due to stockpiling unhealthy foods during the pandemic (Ammar, 2020). In Italy, 50% of participants increased their consumption of comfort foods, with 19.5% reporting weight gain attributed to anxiety and boredom (Scarmozzino & Visioli, 2020). These findings highlight the need for measures promoting healthy eating and stress management during lockdowns.

Self-compassion (SC) emerged as a potential tool for mitigating negative consequences of isolation. SC entails self-kindness, recognizing shared humanity, and mindfulness (Neff, 2003). Studies suggest SC reduces anxiety and depression while promoting adaptive coping mechanisms (Keng, 2012; Van Dam, 2011). Additionally, SC helps improve eating behaviours, body image, and weight management, making it particularly relevant during the pandemic (Rahimi-Ardabili, 2018).

Evidence from Poland shows positive dietary changes during the pandemic, including reduced consumption of processed and unhealthy foods. However, increased intake of sweets and alcohol poses concerns for weight maintenance (Bolesławska, 2021). Similarly, in China, participants reported increased snacking, reduced physical activity, and prolonged sleep duration during the lockdown. Staying at home was linked to skipping breakfast, which contributed to unbalanced diets. The study emphasized the need to reduce snacking, maintain breakfast intake, and encourage physical activity in future lockdowns (Guo-yi, 2021).

The restrictions imposed by COVID-19 resulted in major shifts in both lifestyle and dietary behaviours across the globe, reinforcing the necessity of healthier choices for overall well-being. To mitigate risks, health authorities such as the WHO and the European Federation of the Association of Dietitians advised maintaining a balanced diet to improve immune defences against the virus. (Rodríguez-Pérez, 2020). A balanced diet should not only include green vegetables but also incorporate appropriate proportions of essential nutrients like whole grains, nuts, and unsaturated fats (e.g., olive oil), which are crucial for a robust immune system. A Polish study highlighted weight fluctuations during the lockdown, demonstrating variations across different BMI and age groups, underscoring the profound impact of restricted lifestyles on dietary patterns.

Young adults play a pivotal role in societal development as they form the future workforce and parenthood generation (Gunarathna et al., 2023). Given their potential for long-term health and reproductive responsibilities, understanding how their dietary patterns changed during the COVID-19 lockdown is

essential. Such changes may persist beyond the pandemic, underscoring the need for focused evidence from Sri Lanka. This study addresses this gap by examining dietary and lifestyle shifts among young adults, offering insights critical for future public health interventions.

To better understand these behavioural shifts, this study adopts the Health Belief Model (HBM) as its guiding theoretical framework. The HBM posits that health-related behaviours are influenced by individuals' perceptions of susceptibility and severity of a health condition, the perceived benefits of taking preventive action, and the perceived barriers to change. In the context of COVID-19, young adults' food habits may have been shaped by their perception of vulnerability to the virus, beliefs in the protective value of healthy diets, and barriers such as restricted access to food and economic constraints. Applying the HBM provides a structured lens to interpret how these perceptions influenced dietary changes during the lockdown.

The purpose of this research is to examine how the COVID-19 lockdown in Sri Lanka influenced young adults' food habits, particularly in relation to food accessibility, consumption patterns, and the consequences of these changes.

## **Materials and Methods**

This study employed a descriptive cross-sectional design to assess changes in food habits and their impact on young adults (ages 18–30) in Sri Lanka during the COVID-19 lockdown. The sample consisted of n=118 participants, selected through network sampling, focusing on individuals with access to social media and emails. The study was conducted in Sri Lanka, adhering to the National Youth Policy (Ministry of Youth Affairs and Skills Development, 2014), which defines youth as individuals aged 18–30 (NYP, 2014). Data were collected via a self-administered questionnaire available in Sinhala and English. The questionnaire included demographic details and a verbal rating scale for assessing food habits. Ethical approval was secured from the Ethics Review Committee of KIU, and informed consent was obtained from participants via online platforms. Participant anonymity and data security were ensured throughout the study. Data were analysed using SPSS Version 25, employing descriptive statistics such as frequencies, percentages, and inferential statistical techniques to interpret findings.

## **Results**

Out of 125 respondents, 118 eligible participants (aged 18–30) completed the study. Among them, 70.3% were female, and 94.9% identified as Buddhist and Sinhala. A significant majority were unmarried (66.1%), with 47.5% holding diplomas and 30.5% degrees. Most participants were government employees (60.2%), while 55.9% resided in the Western Province, primarily in Colombo District.

### ***Food Access During Lockdown***

Participants accessed food through multiple means, including shopping in person (59.3%), ordering online (58.5%), and eating out (56.8%). However, only 5.9% consistently shopped in person, and 4.2% always ordered food online. The occasional use of these methods dominated food access behaviours during the lockdown.

### ***Changes in Eating Habits***

Significant dietary changes included decreased consumption of vegetables (41.5%), fruits (38.1%), and chocolates (61.9%), alongside increased water intake (46.6%). Midnight snacking rose (32.2%), while breakfast frequency decreased for 29.7%. Alcohol (89%) and nut consumption (45.8%) remained largely unchanged. Dinner frequency increased for 65.3% of participants, but lunch intake showed minimal variation.

## *Lifestyle Changes*

Participants reported decreased physical activity (59.3%) and increased sleep duration (50.8%). Body weight rose for 58.5% of participants, correlating with increased midnight snacking. BMI shifts highlighted that 36.1% of respondents were classified as overweight, aligning with dietary and activity changes during the lockdown.

## **Discussion and Conclusion**

This study examined the dietary habits, food access, and physical activity of Sri Lankan residents during the COVID-19 lockdown. While most participants maintained their usual diets, physical activity significantly decreased (59.3%), attributed to gym closures, restrictions on public spaces, and limited home exercise options (Ammar et al., 2020). Despite reduced activity, 58.5% reported weight gain, although this was lower than reported in Poland (29.9%) and Italy (48.6%) (Sidor, 2020). Participants showed increased intake of fruits, vegetables, animal products, snacks, and water, with a notable 19.5% rise in snack consumption. This aligns with findings by Di Renzo and Ammar, who identified emotional overeating linked to anxiety and boredom during lockdowns (Ammar, 2020; Di Renzo, 2020). Conversely, dairy consumption declined. While many accessed food through in-person shopping, others resorted to online ordering or home cooking due to restaurant closures. Reduced physical activity during confinement increased sedentary behaviour, potentially leading to adverse health outcomes like insulin resistance and a pro-inflammatory state (Hussain, 2020). Sleep duration increased for 50.8%, but a third reported poorer sleep quality. Extended sleep was associated with skipping breakfast, which may lead to unhealthy snacking and reduced dietary quality. BMI analysis revealed 50.8% of participants were within the normal range, while 36.1% were overweight. Midnight snacking significantly impacted BMI ( $p = 0.002$ ).

This study evaluated the food access, dietary habits, and physical activity of Sri Lankan residents during the initial stage of the COVID-19 lockdown. Most participants obtained food through in-person shopping or online ordering. While the majority maintained their eating habits, notable changes included increased dinner frequency, reduced vegetable consumption, decreased dairy intake, and increased midnight snacking, which significantly impacted BMI. Additionally, participants reported weight gain, with 36.1% identified as overweight. Physical activity declined significantly, while sleep duration increased for 50.8% of participants. The findings highlight the need for targeted public health and policy measures to support young adults' well-being during and beyond pandemics, including nutrition education, food security initiatives, and promotion of physical activity through digital and community-based programmes.

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