

Guest editorial: Exploring nutritional impacts in the context of COVID-19

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The COVID-19 pandemic has profoundly affected several aspects of life, including eating habits and nutritional health. This special issue of Nutrition and Food Science analyses the multiple nutritional impacts observed during this unprecedented period. The collected studies highlight critical insights into how the pandemic has reshaped our relationship with food, nutrition and overall health.

A significant change observed during the pandemic concerns eating habits, influenced by fear and uncertainty. The study by [Başmısırlı *et al.*, 2024](#) analyses the effect of anxiety levels on the nutritional status of adults in the province of Kayseri, Turkey. Higher levels of fear were associated with changes in nutritional habits, such as reduced protein consumption and increased intake of fruit, vegetables, sweets and sugar. This study suggests the need for targeted educational programmes to promote healthy eating habits during times of stress ([Başmısırlı *et al.*, 2024](#)). Gender differences in food intake and physical activity were also notable. The study by [Chong *et al.*, 2024](#) examines these differences among university students in Malaysia. Males had higher energy and macronutrient intakes from the diet than females. Lower fibre intake was significantly associated with higher BMI in male students, highlighting the need for gender-specific health promotion strategies ([Chong *et al.*, 2024](#)). The study by Souza *et al.* analyses comfort food (CF) consumption and associated factors during the pandemic period in Brazil. This online survey included 1,363 people with an average age of 31 years, 80.3% of whom were women. Factors such as increased snacking, worsening sleep quality and perceived stress were linked to increased comfort food consumption among both men and women ([Souza *et al.*, 2023](#)).

Food insecurity became a pressing issue during the pandemic, especially in countries such as Malaysia. The study by [Dauda Goni *et al.*, 2024](#) assessed household food insecurity during the initial phase of the Movement Control Order in Malaysia. Almost half of the participating households experienced food insecurity, with predictive factors such as household income, marital status and employment status. This study emphasises the importance of targeted support for vulnerable groups ([Dauda Goni *et al.*, 2024](#)). In Indonesia, studies by [Amrullah *et al.* \(2024\)](#) and Rahayu *et al.* analysed changes in food consumption expenditure and complementary feeding practices during the pandemic. Amrullah *et al.* found an increase in household expenditure on home-cooked food and a decrease in expenditure on prepared food. Rahayu *et al.* reported that economic instability significantly affected the consumption of meat foods for supplementary feeding, while consumption of dairy products and eggs remained stable ([Rahayu *et al.*, 2024](#)).

Several studies have explored the impact of dietary patterns and specific nutritional interventions on COVID-19 outcomes. Hassanizadeh *et al.* found that a 'high protein and fibre' dietary pattern was associated with lower odds of COVID-19 among adults in Iran ([Hassanizadeh *et al.*, 2024](#)). Mohajeri and Abedi's study on enteral nutrition containing probiotics highlighted its benefits in reducing inflammatory markers and gastrointestinal complications in COVID-19 patients ([Mohajeri and Abedi, 2024](#)). The nutritional prognostic index (PNI) has emerged as a key tool for predicting mortality in COVID-19 patients. The study by Nergiz and Ozturk analysed the effect of PNI on mortality in



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COVID-19 patients with bronchopneumonia. Higher PNI values were associated with better laboratory parameters, suggesting its potential use for early identification and intervention in high-risk patients (Nergiz and Ozturk, 2023). The increase in food delivery applications and fast-food consumption during the pandemic is another critical topic. The cross-sectional study by Aldhamen *et al.* analysed the impact of the blocking and increased use of food delivery apps (FD apps) on fast-food consumption in Saudi Arabia. The increased use of these apps significantly influenced eating behaviour and nutritional patterns, leading to an increase in fast food consumption (Aldhamen *et al.*, 2023). Mohajeri *et al.* analysed the association between dietary antioxidant intake and oxidative stress markers in the serum of patients with angina in COVID-19. Their results suggest that higher dietary antioxidant intake is linked to reduced inflammation and improved clinical outcomes (Mohajeri, 2024).

This special issue collectively highlights the profound and varied nutritional impacts of the COVID-19 pandemic. The results emphasise the need for targeted nutrition strategies and policies to address the challenges posed by this global health crisis. To better prepare for future pandemics, it is crucial to implement these strategies and continuously adapt them based on emerging evidence. Proactive measures in the field of nutrition and public health can help mitigate the impact of similar crises in the future.

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