

The COVID-19 pandemic led to a rapid shift to virtual education, raising concerns about the ergonomics and posture of college students at home. This project aims to optimize home study environments by assessing posture and muscle fatigue using surface electromyography (EMG). It identifies and quantifies musculoskeletal problems caused by non-ergonomic home setups and analyzes the relationship between prolonged screen time, poor posture, and muscle fatigue. Using the BITalino (r)evolution EMG kit and Kinovea software, university students who studied virtually during the pandemic were assessed. The data is processed to propose ergonomic recommendations to improve posture, reduce muscle fatigue, and promote a healthier study environment for better academic performance.