

**Project Title:** Mental Health and Substance Use in Colorado Healthcare and Graduate Students During COVID-19: A Mixed-Methods Investigation

**Background:** The COVID-19 pandemic continues to impact mental health by exacerbating anxiety, fear, and substance use worldwide. Several studies have demonstrated increased substance use and declining mental health in students abroad, but no investigation has assessed the COVID-19 pandemic's effects on mental health and substance use in graduate and healthcare students in the United States.

**Objective:** Researchers sought to quantify and qualify the ongoing COVID-19 pandemic's impacts on Colorado graduate and healthcare students' mental health and substance use, hypothesizing that greater COVID-19-related fear would correlate with higher substance use rates across metrics.

**Methods:** Investigators utilized an online, institutionally-distributed, mixed-methods survey to assess quantitative and qualitative changes in various mental health metrics and substance use in Colorado healthcare and graduate students during the COVID-19 pandemic from June 2020 to February 2021. An augmented Fear of COVID-19 Scale (FCV-19S) academic survey served as the primary data collection vessel.

**Results:** Students who reported higher levels of depression, exhaustion, loneliness, nervousness, and anger had significantly higher FCV-19S scores. Higher FCV-19S scores were also significantly associated with increased levels of alcohol consumption, binge drinking, and cannabis use. Qualitative analysis elucidated recurring themes regarding use frequency, substances used, and the reasons underlying use. Further

qualitative analysis revealed three common student concerns: worries regarding the length of the pandemic, its social impact, and educational/financial impact.

**Conclusions:** The COVID-19 pandemic has negatively affected the well-being of Colorado healthcare and graduate students, directly increasing substance use while simultaneously exacerbating feelings of fear, anxiety, and helplessness.