

**Title:** Best-worst scaling in studying the impact of the coronavirus pandemic on health professionals in Ghana

### Abstract

In this study, we utilized a best-worst scaling experiment design to assess the potential factors associated with depression, anxiety, and stress among health professionals following the experience of the COVID-19 pandemic. The maximum difference model was performed to analyze the potential risk factors associated with depression, anxiety, and stress. As a case study, a total of 300 health professionals in Ghana were included in the survey. The majority, 112 (68.7%) male health professionals and 97 (70.8%) female health professionals reported that they had encountered suspected COVID-19 patients. 83 (50.9%) of the male health professionals and 76 (55.5%) of the female health professionals reported that they had encountered confirmed COVID-19 patients. A considerable proportion of the males 59 (36.2%) and females 57 (41.6%) health professionals reported coming into direct contact with COVID-19 lab specimens. The findings indicated that a high proportion of health professionals encountered suspected or confirmed COVID-19 patients, while a considerable proportion had direct contact with COVID-19 lab specimens leading to psychological problems. Risk factors such as contact with confirmed COVID-19 patients, the relentless spread of the coronavirus, death of patients and colleagues, shortage of medical protective equipment, direct contact with COVID-19 lab specimens, and the permanent threat of being infected should be given special attention, and necessary psychological intervention provided for health professionals endorsing these risk factors. Improving the supply of medical protective equipment to meet occupational protection practices, sufficient rest, and improving the vaccination of the population might help safeguard health professionals from depression, anxiety, and stress. Our results provide insight into policy discussions on the mental health of health professionals and interventions that are essential to enhance psychological resilience.