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# The importance of adaptive coping, peer support, psychological input, team resilience, and supportive management among fire and rescue service workers in maintaining wellbeing throughout the COVID-19 pandemic: a cross-sectional survey

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## Abstract

**Background** Identifying wellbeing concerns among fire and rescue service workers (FRSWs) during COVID-19 is crucial to ensuring a safe and effective service is provided by these keyworkers. FRSWs are known to be at risk of developing traumatic stress-related conditions; however, little is known about the effects of COVID-19 stressors on the mental wellbeing of FRSWs. We tested two hypotheses: (1) COVID-19-related stressors (ie, risk perception, stress, burnout, and post-traumatic stress disorder [PTSD]) will predict decreased mental wellbeing and (2) protective factors will mediate the relationship between COVID-19 stressors and mental wellbeing.

**Methods** The study consisted of a cross-sectional online survey exploring the effects of COVID-19 on the mental wellbeing of FRSWs (n=555) in the UK, using data collected during third lockdown (between Jan 25 and March 31, 2021). The survey, advertised on social media and fire and rescue service intranets, included the COVID-19 Perceived Risk Scale, Stress Measure, Burnout Scale, PTSD Checklist–Civilian Version, and the Warwick Edinburgh Mental Wellbeing Scale. FRSWs' perspectives on what they found helpful in maintaining their wellbeing throughout the pandemic were also explored. Quantitative data were assessed via a regression model and mediation analysis, and content analysis was done on the qualitative data collected through open-ended questions asking FRSWs about the effects on COVID-19 on their mental wellbeing and their support needs. The institutional ethics committee granted ethical approval and participants gave informed consent.

**Findings** Negative associations between lower scores on mental wellbeing and higher scores on COVID-19 risk factors were found for COVID-19-related stress ( $r=-0.49$ ,  $p<0.0001$ ) and burnout ( $r=-0.62$ ,  $p<0.0001$ ) scores. The independent variables, COVID-19 risk perception, stress, burnout, and PTSD outcomes, accounted for 50.90% of variance ( $F=118.00$  [5–543],  $p<0.0001$ ) and were each significant in contributing to the model. The overall mediation model was significant ( $F=341.14$  [1–553],  $p<0.001$ ) explaining 38.50% of the variance, with team resilience and adaptive coping significantly contributing towards the model. Qualitative data analysis showed that FRSWs' emphasised the need for psychological input, peer support, supportive management, and visible leadership when adapting to the challenges of the pandemic and maintaining wellbeing.

**Interpretation** Risks to FRSWs' mental wellbeing associated with COVID-19 stressors might be buffered by fostering team-based resilience, adaptive coping, and peer support. Offering psychological input for FRSWs who need it and adopting a trauma-informed work environment is encouraged. Supportive management and visible leadership could help FRSWs to adapt to the constant change and challenges associated with COVID-19 and in preparedness for transitioning from the response to the recovery phase of the pandemic.

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### Contributors

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### Declaration of interests

We declare no competing interests.

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