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## Impact of COVID-19 pandemic on psychological health of a sample of the health care workers in the western region of Kingdom of Saudi Arabia

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The COVID-19 pandemic is rapidly spreading, and health care systems are being overwhelmed with the huge number of cases, with a good number of cases requiring intensive care. It has become imperative to develop safe and effective treatment strategies to improve survival. In this regard, understanding the pathogenesis of COVID-19 is highly important. Many hypotheses have been proposed, including the ACE/angiotensin-II/angiotensin receptor 1 pathway, the complement pathway, and the angiotensin-converting enzyme 2/mitochondrial assembly receptor (ACE2/MasR) pathway. SARS-CoV-2 binds to the ACE2 on the cell surface, downregulating the ACE2, and thus impairs the inactivation of bradykinin and des-

Arg9-bradykinin. Bradykinin, a linear nonapeptide, is extensively distributed in plasma and different tissues. Kininogens in plasma and tissue are the main sources of the two vasoactive peptides called bradykinin and kallidin. However, the role of the dysregulated bradykinin pathway is less explored in the pathogenesis of COVID-19. Understanding the pathogenesis of COVID-19 is crucial for the development of new effective treatment approaches which interfere with these pathways. In this review, we have tried to explore the interaction between SARS-CoV-2, ACE2, bradykinin, and its metabolite des-Arg9-bradykinin in the pathogenesis of COVID-19.

### Biography

Mohammad Shahid is an MSc Nursing post graduate in Medical Surgical Nursing and specialized in Critical Care Nursing worked as ICU nurse and Nurse Educator. He has completed my Post Graduate Diploma in Hospital Management. Currently, he is working as Nurse Educator in Cardiac Center of King Abdullah Medical City, Makkah since October 2013. At present, his research area is in Nursing Education and Nursing Research.

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