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Original Research

Factors influencing mHealth adoption and its impact on mental well-being during COVID-19 pandemic: A SEM-ANN approach

Mirza Mohammad Didarul Alam ^{a, b}  , Mohammad Zahedul Alam ^c, Syed Abidur Rahman ^d, Seyedeh Khadijeh Taghizadeh ^d

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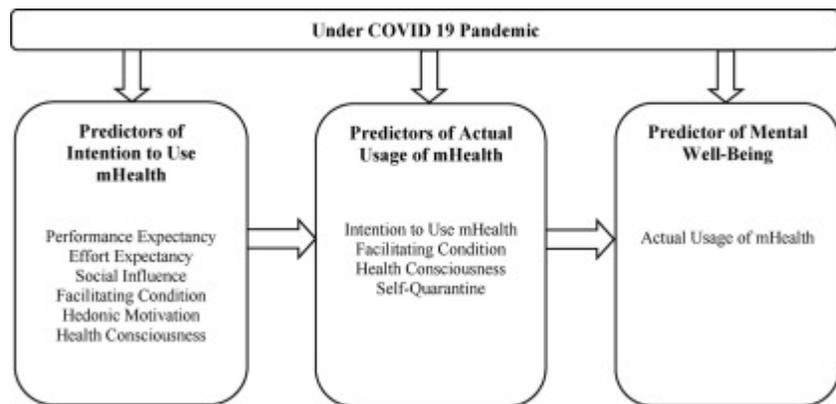
Highlights

- Examines the influencing factors of mHealth adoption during COVID-19 pandemic.
- Investigates the impact of mHealth usage on mental well-being of the users.
- UTAUT2 model is extended with self-quarantine and health consciousness factors.
- Artificial Neural Network approach is used to get more valid statistical results.
- Self-quarantine and Health consciousness are important predictors of mHealth adoption.

Abstract

The objectives of this study are to examine the factors affecting the intention and actual usage behavior on mHealth adoption, investigate the effect of actual usage behavior of mHealth on mental well-being of the end-users, and investigate the moderating role of self-quarantine on the intention–actual usage of mHealth under the coronavirus disease (COVID-19) pandemic situation. The required primary data were gathered from the end-users of mHealth in Bangladesh. Using the Unified Theory of Acceptance and Use of Technology (UTAUT2), this study has confirmed that performance expectancy, effort expectancy, social influence, hedonic motivation, and facilitating conditions have a positive influence on behavioral intention whereas health consciousness has an impact on both intention and actual usage behavior. mHealth usage behavior has an affirmative and meaningful effect on the mental well-being of the service users. Moreover, self-quarantine has strong influence on actual usage behavior but does not moderate the intention-behavior relationship. In addition, due to the existence of a non-linearity problem in the data set, the Artificial Neural Network (ANN) approach was engaged to sort out relatively significant predictors acquired from Structural Equation Modeling (SEM). However, this study contributes to the emergent mHealth literature by revealing how the use of the mHealth services elevates the quality of patients' mental well-being under this pandemic situation.

Graphical abstract



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Keywords

mHealth; Self-quarantine; Mental well-being; UTAUT2; Artificial neural network

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