Comments on "Identifying psychological antecedents and predictors of vaccine hesitancy through machine learning: A cross sectional study among chronic disease patients of deprived urban neighbourhood, India"

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Dear Editor,

we read the publication by Rustagi *et al*. on "Identifying psychological antecedents and predictors of vaccine hesitancy through machine learning: A cross sectional study among chronic disease patients of deprived urban neighbourhood, India" [1] with a great interest. Rustagi *et al*. concluded that "*Higher scores for COVID-19 health literacy and preventive behaviour, along with family support, monthly income, past COVID-19 screening, adherence to medications and age were associated with lower vaccine hesitancy"* [1].

We agree that there are various plausible causes of COVID-19 vaccination apprehension. The current machine learning technique could be helpful in determining the components. However, it is important to keep in mind that the COVID-19 epidemic status is constantly changing. Every day, more data is available. When there is a chance in the evidence, whether pro or con, to change one's mind on vaccination [2]. A recent investigation from Hong Kong, for example, can indicate temporal variations in parameters linked to adult COVID-19 vaccine reluctance [3]. According to Xiao *et al*. [3] the factors associated with COVID-19 vaccine aversion changed over time.

While there was no link between chronic medical disorders and vaccine fear when the mass vaccination programme began, chronic medical issues were shown to be more likely to be cautious a few months later [3].

Twitter debate about COVID-19 vaccines in the United States varies substantially amongst communities and evolved over time, according to a second study from the United States [4]. This essential component, a probable temporal shift in reluctance through time, must be recognised. The local context is interesting to know during machine learning development, and whether there is a substantial probability of the local scenario remains an open subject. A long-term recurring evaluation is required to conclude the usefulness of the new machine learning system.

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