Usability Evaluation of a Self-Report Mobile App for COVID-19 Symptoms: Supporting Health Monitoring in the Work Context

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Abstract : The confinement and restrictions adopted to avoid an exponential spread of the COVID-19 have negatively impacted the Peruvian economy. In this context, Industries offering essential products could continue operating, but they have to follow safety protocols and implement strategies to ensure employee health. In view of the increasing internet access and mobile phone ownership, "Alerta Temprana", a mobile app, was developed to self-report COVID-19 symptoms in the work context. In this study, the usability of the mobile app "Alerta Temprana" was evaluated from the perspective of health monitors and workers. In addition to reporting the metrics related to the usability of the application, the utility of the system is also evaluated from the monitors' perspective. In this descriptive study, the participants used the mobile app for two months. Afterwards, System Usability Scale (SUS) questionnaire was answered by the workers and monitors. A Usefulness questionnaire with open questions was also used for the monitors. The data related to the use of the application was collected during one month. Furthermore, descriptive statistics and bivariate analysis were used. The workers rated the application as good (70.39). In the case of the monitors, usability was excellent (83.0). The most important feature for the monitors were the emails generated by the application. The average interaction per user was 30 seconds and a total of 6172 self-reports were sent. Finally, a statistically significant association was found between the acceptability scale and the work area. The results of this study suggest that Alerta Temprana has the potential to be used for surveillance and health monitoring in any context of face-to-face modality. Participants reported a high degree of ease of use. However, from the perspective of workers, SUS cannot diagnose usability issues and we suggest we use another standard usability questionnaire to improve "Alerta Temprana" for future use.

Keywords : public health in informatics, mobile app, usability, self-report
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