

Effectiveness and acceptance of a smartphone-based virtual agent screening (KANOPEE app) for alcohol and tobacco problems and associated risk factors during COVID-19 pandemic in the general population

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AIM

To determine if a smartphone application (KANOPEE) using an embodied conversational agent could identify risk factors for problems with alcohol/tobacco use in the context of the current COVID-19 epidemic; to assess adherence and to evaluate trust and acceptance of the application.

METHODS

The conversational agent, named Jane, interviewed participants about perceived problems with use of alcohol and tobacco since pandemic, explored risk for tobacco and alcohol use disorder with the CDS-5 and CAGE and experience of craving for each substance. For those at risk, a brief intervention was implemented by the app. Descriptive, univariate and multivariate analyses were performed to specify personalized associations with reporting a problem with alcohol/tobacco use, descriptive analysis reported experience with the intervention and acceptance and trust in the app.

RESULTS

Between April 22 to October 26, 2020; 1588 French participants completed the KANOPEE interview and 318 answered the acceptance and trust scales. 42% of tobacco users and 27% of alcohol users reported problem use since the pandemic. Positive screening with CDS-5 and CAGE, and craving were associated to experiencing problems ($p < .0001$). Lockdown periods influenced alcohol ($p < .0005$) but not tobacco use ($p > .05$). 88% users reported KANOPEE was easy to use and 82% found Jane to be trustworthy and credible.

DISCUSSION

Alcohol and tobacco are the most available substances for managing stress in the current pandemic and increase risk for substance use disorder. In this context direct human interactions must be limited and access to usual onsite health services is reduced. eHealth smartphone applications are an alternative for screening and early interventions in the general population. KANOPEE was able to screen for risk factors for Substance Use Disorder and was acceptable to users.

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