COVID-19 fake news, conspiracy beliefs and the role of eHealth literacy: an Italian nationwide survey

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Background:
The pandemic has been accompanied by an infodemic, which includes false information that can lead to harmful consequences. Additionally, conspiracy theories have been linked to lower preventive behaviors. This work mainly aims to explore the skill in identifying COVID-19 fake news and the conspiracies beliefs.

Methods:
A cross-sectional study has been conducted amongst a convenience sample throughout Italy, using a Computer-Assisted Web Interview method (from 12 April 2021-ongoing). The survey included the Single-Item Literacy Screener (SILS), the eHealth Literacy Scale (eHEALS), a Fake News Score (FNS: percentage of misclassified news), a Conspiracy Score (CS: score from 1 to 5). Multivariable linear regressions were run ($p < 0.05$ as significant).

Results:
Up to date, participants were 1252. The median FNS and CS were: 25% (IQR=19-44) and 2.8 (IQR=2.2-3.4). For instance, 54% thought ibuprofen worsens COVID-19 symptoms and 50% agreed with ''politicians usually do not tell us the motives for their decisions''. The 17% had low health literacy (SILS) and 41% low eHealth literacy (eHEALS). COVID-19 vaccine hesitant people were 13%. The multivariable models identified many significant relationships. Low economic status and vaccine hesitancy were positively associated with FNS and CS. Higher education had a negative association with FNS and CS. Age was positively associated with FNS. Low health and eHealth literacy were positively associated with FNS. Low eHealth literacy had a negative association with CS. FNS was positively associated with CS.

Conclusions:
Associations between news misclassification, conspiracy beliefs and vaccine hesitancy might suggest shared determinants. EHealth literacy had a conflicting role. Attention should be paid to the mass media COVID-19 coverage as key information source for the general population. Public health campaigns should be planned to fight beliefs that hinder the reduction of transmission and might cause additional damages.

Key messages:
- The median percentage of misclassified news was 25% (IQR=19-44) and the median Conspiracy Score was 2.8 (IQR=2.2-3.4). COVID-19 vaccine hesitant people were 13% and 41% had a low eHealth literacy.
- News misclassification, conspiracy beliefs and vaccine hesitancy were associated. EHealth literacy had conflicting associations with fake news and conspiracy beliefs.