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Vaccination and risk compensation during the COVID-19 pandemic in France

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Abstract

Vaccination has played a key role in reducing the health burden of COVID-19 (World Health Organisation (WHO), 2022), however, concern has been raised worldwide that risk compensation, a process whereby feelings of security arising from being vaccinated may lead people to reduce their engagement in other protective behaviours (Hedlund, 2000), could detract from the overall health benefit of the COVID-19 vaccination campaign (WHO, 2020). We explored whether COVID-19 vaccination elicited risk compensation and whether this changed over time by conducting a repeated cross-sectional study at seven intervals over the initial months of the vaccine rollout in France (February–September, 2021). Participants ($N = 14,003$) completed an online survey measuring vaccination status, vaccination intention and engagement in four preventive behaviours: mask wearing, avoidance of physical contact, hand hygiene, and avoiding social gatherings. Risk compensation was measured indirectly by comparing levels of engagement in protective behaviours according to vaccination status, with those unvaccinated but intending to vaccinate serving as a baseline. Risk compensation did not occur systematically and was mostly observed towards the end of the vaccine rollout for two of the four protective behaviours: avoiding social gatherings and wearing a mask. Fully-vaccinated participants reported avoiding social gatherings less often than those intending to vaccinate in July (Adjusted Odds Ratio (AOR) = .72, $p = .045$), and in September (AOR = .54, $p = .022$). A similar trend was observed in September among participants vaccinated with one dose who reported wearing a mask less often than their unvaccinated-but-intending-to-vaccinate counterparts (AOR = .48, $p = .029$). Our findings suggest that whilst unlikely to impede the overall effectiveness of public health campaigns, risk compensation,

particularly among certain groups, nonetheless merits attention when designing informed, targeted public health messages and policy.

Key messages

- Limited evidence of risk compensation was observed towards the end of the vaccination campaign in France.
- Risk compensation may not negate overall health benefit of a vaccination campaign, however from a public health perspective, nonetheless merits attention.