



DistantButClose

2024-2027

Loneliness and social isolation during COVID-19: How they matter for public health

Research findings from the DistantButClose-project

DistantButClose Consortium













COVID-19 in the Belgian context



Focus

During the COVID-19 pandemic, various measures were taken to limit the spread of the virus. These included wearing face masks, hand washing, keeping physical distance and quarantine in the case of suspected infection^(1,2). While these steps were proven effective in reducing transmission of the virus, their success largely depended on how well people followed them^(3,4,5). Compliance with these measures is influenced by multiple factors, an important one being social connection^(6,7). At the same time, adherence to these measures may also impact social connection⁽⁸⁾. This study examines the relationship between social connection and compliance with preventive measures.

Social connection

Relationship

Compliance with preventive measures



Social support and satisfaction with social contacts were used as social connection indicators



Compliance was assessed with several preventive measures: hygiene rules, physical distancing (1.5 meters), staying home measures, social restriction (limiting number of social contacts)

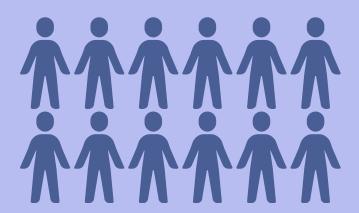
Method



Belgian population



COVID-19 Health Surveys





11,974 adults aged 18 and older

l April 2020 - March 2021 🛚



We examined how social connection and compliance were related over time, using descriptive analyses and Random-Intercept Cross-Lagged Panel Modelling (RI-CLPM).

COVID-19 in the Belgian context



Results

Participants generally reported high levels of compliance with pandemic measures



This decreased slightly throughout the COVID-19 pandemic

Participants reported overall moderate levels of social support



This decreased slightly throughout the COVID-19 pandemic

Participants reported low to moderate levels of social satisfaction

This remained the same throughout the COVID-19 pandemic



People who felt socially supported were more likely to report following COVID-19 measures at a later point in time

particularly with

- staying home measures
- social restriction rules
- mask wearing

People who felt satisfied with their social contacts were more likely to report following COVID-19 measures at a later point in time



particularly with

- staying home measures
- physical distancing
- hygiene measures

Especially in the more stringent periods of the pandemic



People who were more compliant with social restrictions were more likely to feel dissatisfied with their social contacts at a later point in time

Conclusion

Social connection plays a role in adherence to preventive measures during a public health crisis. Social support and feeling satisfied with social connections can contribute to compliance, suggesting that fostering social connection may enhance public health outcomes. However, compliance with restrictive measures can lower social satisfaction, highlighting the importance of balancing public health guidelines with efforts to maintain social connection during future crises.

Given the impact of social connection on compliance, it is essential to safeguard social connection when implementing public health measures during crises.



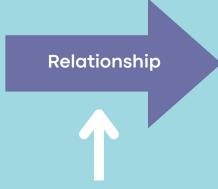
COVID-19 in the European context



Focus

During the COVID-19 pandemic, various measures were implemented to limit the spread of the virus. While social distancing helped reduce transmission, it also increased feelings of loneliness, which may have influenced people's willingness to get vaccinated^(9,10,11). The strictness of these measures varied across countries, potentially shaping this relationship in different ways^(12,13,14). This study examines how loneliness, social isolation and living alone relate to COVID-19 vaccine hesitancy in adults aged 50 and over.

Loneliness, social isolation and living alone



COVID-19 vaccine hesitancy

Stringency of implemented containment measures



Living alone refers to one's household type⁽¹⁵⁾



Social isolation refers to an objective situation characterised by a limited network of relationships and infrequent social contact^(16,17)



Loneliness is the unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either quantitatively or qualitatively⁽¹⁸⁾



Vaccine hesitancy is motivational state of being conflicted about, or opposed to, getting vaccinated; this includes intentions and willingness⁽¹⁹⁾

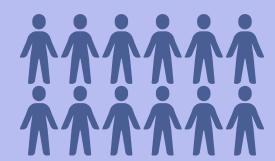
Method



28 European countries and Israel



Survey of Health, Ageing and Retirement in Europe (SHARE) & SHARE Corona Surveys





36,890 adults aged 50 and above

Summer 2021



We used two-level binomial logistic regression with time lagged effects.

COVID-19 in the European context



Results

15.1% reported COVID-19 vaccine hesitancy

25.9% reported to be living alone

28.7% reported loneliness

reported higher social isolation than average



COVID-19 vaccine hesitancy in Europe

Highest in Bulgaria (71.7%) and Romania (63.0%)

Below 3% in Malta, Portugal, Denmark, Spain and Sweden COVID-19 vaccine hesitancy in Belgium





Findings for European women

Women living alone reported more hesitancy than women living with a partner

Women who felt more socially isolated reported more hesitancy

Women living with others (not a partner) reported more hesitancy



Findings for European men

Men living alone reported more hesitancy than men living with a partner

Men who felt more socially isolated reported more hesitancy

Men who felt more lonely reported more hesitancy



People were more likely to be COVID-19 vaccine hesitant in countries with high degrees of excess COVID-19 mortality

The strictness of pandemic measures in European countries did not change the relationship between living alone, social isolation, loneliness, and hesitancy toward the COVID-19 vaccine



Conclusion

This study emphasizes the importance of the absence of a partner, social isolation, and loneliness when addressing vaccine hesitancy in adults aged 50 and over. This highlights the critical role of social factors in shaping COVID-19 vaccine hesitancy. Future health policies should move beyond a narrow focus on epidemiological threats to tackle the social dimensions of health crises. Addressing the social roots of vaccine hesitancy is not just key to managing the COVID-19 pandemic but also serves as a blueprint for a more resilient and inclusive approach to future health crises.



Compassionate and effective vaccination programs must consider the unique social contexts of older adults to ensure equitable health outcomes.

References



- 1. Centers for Disease Control and Prevention. (2025). *How to Protect Yourself and Others*. https://www.cdc.gov/covid/prevention/index.html
- https://www.cdc.gov/covid/prevention/index.html
 2. World Health Organization. (n.d.). *Advice for the public on COVID-19*.
- https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public 3. Ayouni, I., Maatoug, J., Dhouib, W., Zammit, N., Fredj, S. B., Ghammam, R., & Ghannem, H. (2021). Effective public health measures to mitigate the spread of COVID-19: a systematic review. *BMC public health, 21*(1), 1015.
- 4. Talic, S., Shah, S., Wild, H., Gasevic, D., Maharaj, A., Ademi, Z., Li, X., Xu, W., Mesa-Eguiagaray, I., Rostron, J., Theodoratou, E., Zhang, X., Motee, A., Liew, D., & Ilic, D. (2021). Effectiveness of public health measures in reducing the incidence of covid-19, SARS-CoV-2 transmission, and covid-19 mortality: systematic review and meta-analysis. *BMJ*, *375*.
- 5. Chang, S. L., Harding, N., Zachreson, C., Cliff, O. M., & Prokopenko, M. (2020). Modelling transmission and control of the COVID-19 pandemic in Australia. *Nature communications*, *11*(1), 5710.
- 6. Okruszek, Ł., Aniszewska-Stańczuk, A., Piejka, A., Wiśniewska, M., & Żurek, K. (2020). Safe but lonely? Loneliness, anxiety, and depression symptoms and COVID-19. *Frontiers in psychology, 11*, 579181.
- 7. Stickley, A., Matsubayashi, T., & Ueda, M. (2021). Loneliness and COVID-19 preventive behaviours among lapanese adults. *Journal of Public Health*, *43*(1), 53–60.
- 8. Ernst, M., Niederer, D., Werner, A. M., Czaja, S. J., Mikton, C., Ong, A. D., Rosen, T., Brähler, E., & Beutel, M. E. (2022). Loneliness before and during the COVID-19 pandemic: A systematic review with meta-analysis. *American Psychologist*, 77(5), 660.
- 9. Baarck, J., d'Hombres, B., & Tintori, G. (2022). Loneliness in Europe before and during the COVID-19 pandemic. *Health Policy, 126*(11), 1124–1129.
- 10. Galgali, M. S., Helm, P. J., & Arndt, J. (2023). Feeling too isolated to be vaccinated? The contributing role of subjective interpersonal isolation factors towards COVID-19 vaccine hesitancy and resistance. Social Science & Medicine, 323, 115865.
- 11. Stickley, A., Matsubayashi, T., & Ueda, M. (2021). Loneliness and COVID-19 preventive behaviours among Japanese adults. *Journal of Public Health, 43*(1), 53–60.
- 12. Al-Zubaidy, N., Fernandez Crespo, R., Jones, S., Drikvandi, R., Gould, L., Leis, M., Maheswaran, H., Neves, A. L., & Darzi, A. (2023). Exploring the relationship between government stringency and preventative social behaviours during the COVID-19 pandemic in the United Kingdom. *Health Informatics Journal*, 29(4).
- 13. Kavaliunas, A., Ocaya, P., Mumper, J., Lindfeldt, I., & Kyhlstedt, M. (2020). Swedish policy analysis for Covid-19. Health Policy and Technology, 9(4), 598–612.
- 14. Waterschoot, J., Morbée, S., Van Den Bergh, O., Yzerbyt, V., Raemdonck, E., Brisbois, M., Schmitz, M., Klein, O., Luminet, O., Van Oost, P., & Vansteenkiste, M. (2023). How the Stringency of the COVID-19 Restrictions Influences Motivation for Adherence and Well-Being: The Critical Role of Proportionality. *International Journal of Health Policy and Management*, 12(1), 1–13.
- 15. Victor, C., Scambler, S., Bond, J., & Bowling, A. (2000). Being alone in later life: Loneliness, social isolation and living alone. *Reviews in Clinical Gerontology, 10*(4), 407–417.
- 16. De Jong-Gierveld, J., Van Tilburg, T. G., & Dykstra, P. A. (2018). New ways of theorizing and conducting research in the field of loneliness and social isolation. In D. Perlman & A. L. Vangelisti (Eds.), *The Cambridge handbook of personal relationships* (2nd ed., pp. 91–404). Cambridge University Press.
- 17. Ong, A. D., Uchino, B. N., & Wethington, E. (2016). Loneliness and health in older adults: A mini-review and synthesis. *Gerontology*, *62*(4), 443–449.
- 18. Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. In S. Duck & R. Gilmour (Eds.), Personal relationships: Personal relationships in disorder (Vol. 3, pp. 31–56). Academia Press.
- 19. World Health Organization. (2022). *Behavioural and social drivers of vaccination: tools and practical guidance for achieving high uptake.* https://iris.who.int/handle/10665/354459

Authors



GHENT UNIVERSITY

Department of Sociology Hedera



SCIENSANO

Scientific Directorate of Epidemiology and Public Health Health Information



UNIVERSITY OF ANTWERP

Department of Sociology Center for Population, Family and Health



GHENT UNIVERSITY

Department of Public
Health and Primary Care
Health Promotion



UNIVERSITÉ LIBRE DE BRUXELLES

School of Public Health Centre for Research in Epidemiology, Biostatistics, and Clinical Research

How to reference this factsheet

Paredis, M., Delaruelle, K., Taeldeman, V., Ceuterick, M., Verhaegen, K., Braekman, E., Deforche, B., Dierckens, M., Schrijvers, K., Castetbon, K., Holmberg, E., Mortelmans, D., Vergauwen, J., Batur Van Liempt, Z., & Bracke, P. (2025). *Loneliness and social isolation during COVID-19: How they matter for public health* [Fact sheet]. DistantButClose. URL

Contact us and follow the project updates





@DistantButClose



<u>Our website</u>



Maaike.Paredis@ugent.be
Valentien.Taeldeman@ugent.be
Katrijn.Delaruelle@ugent.be
Melissa.Ceuterick@ugent.be









