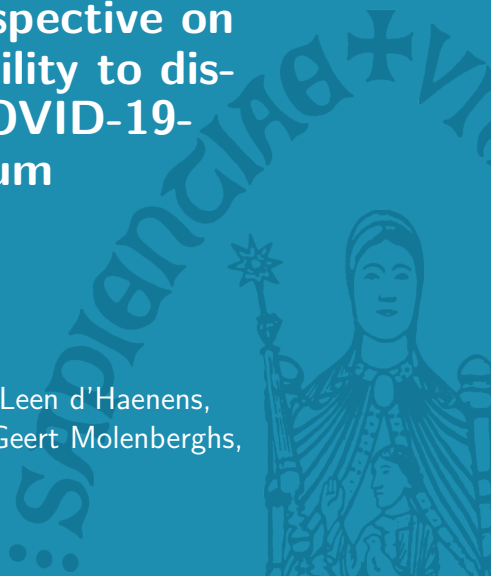# A longitudinal perspective on perceived vulnerability to disease during the COVID-19-pandemic in Belgium
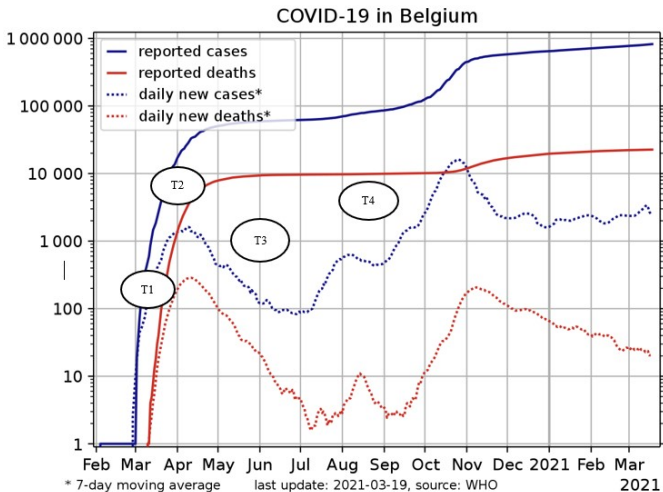
Leuven 03/05/2023

Presenter: Margaux Delporte
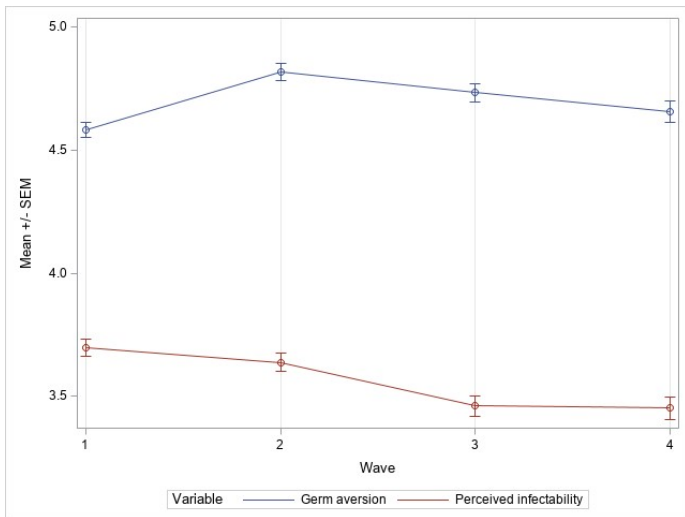
Co-authors:David De Coninck, Leen d'Haenens, Martial Luyts, Geert Verbeke, Geert Molenberghs, Koen Matthijs

1 Timing

COVID-19 in Belgium

1 Responses

1 Predictors

▶ Sociodemographic characteristics
▶ Media usage
▶ Economic situation
▶ The ability to work from home
▶ COVID-19 infection

2 Linear mixed models

$$
\begin{aligned}
Y_{1ij} &= \boldsymbol{X}_{1ij}\boldsymbol{\beta}_1 + b_{10i} + b_{11i}t_{ij} + \epsilon_{1ij}, \\
Y_{2ij} &= \boldsymbol{X}_{2ij}\boldsymbol{\beta}_2 + b_{20i} + b_{21i}t_{ij} + \epsilon_{2ij} \\
\epsilon_{1i} &\sim N(\boldsymbol{0}, \boldsymbol{\Sigma}_{1i}) \\
\epsilon_{2i} &\sim N(\boldsymbol{0}, \boldsymbol{\Sigma}_{2i}) \\
(b_{10i}, b_{11i}) &\sim N(\boldsymbol{0}, \boldsymbol{D}_1) \\
(b_{20i}, b_{21i}) &\sim N(\boldsymbol{0}, \boldsymbol{D}_2)
\end{aligned}
$$

2 Time dependent covariates

2 Principal component analysis

Table 1. Factor Loadings of the Factor Analysis after Varimax Rotation.

	Commercial/ tabloid	Public/ quality	Digital/ face-to-face
Commercial television	**0.788**	-0.054	0.076
Commercial radio	**0.607**	-0.159	0.229
Popular newspapers	**0.563**	0.338	-0.159
Social media channels of commercial/popular news media	**0.673**	0.198	0.301
Public television	0.143	**0.697**	-0.066
Public radio	-0.073	**0.639**	0.187
Quality newspapers	-0.06	**0.628**	0.0556
Social media channels of public/quality news media	0.189	**0.553**	0.311
Face to face contacts	-0.023	0.019	**0.802**
Internet	0.199	0.267	**0.479**
Social media of family, friends and colleagues	0.22	0.09	**0.765**

3   Results

Effect	Infectability		Germ aversion	
	F-value (p-value)	Standardized β coefficient	F-value (p-value)	Standardized β coefficient
Wave	0.632 (0.594)	-	2.111 (0.097)	-
Gender	14.527 (<.001)	-3.812	42.757 (<.001)	-5.896
Student	-	-	0.145 (0.704)	-0.247
Permanent disability	6.206 (0.013)	2.492	6.975 (0.008)	2.640
Living environment	13.311 (<0.01)	-	1.356 (0.238)	-
Biological grand(parents)	-	-	4.901 (0.027)	-2.214
Grand(parents) in law	3.998 (0.046)	-1.999	-	-
Age	1.122 (0.290)	-0.119	27.265 (<.001)	4.593
No Children	-	-	4.726 (0.030)	2.173
COVID-19 at T1	30.509 (<.001)	5.523	4.956 (0.026)	2.226
Working from home	-	-	0.058 (0.944)	-
Economic situation	35.778 (<.001)	-5.982	21.667 (<.001)	-4.655
Media usage	-	-	4.842 (<.001)	-
Time*Gender	-	-	3.911 (0.009)	-
Time *Student	-	-	3.316 (0.020)	-
Time *Living Environment	3.044 (<.001)	-	5.376 (<.0001)	-
Time *Age	3.660 (0.012)	-	3.324 (0.019)	-
Time *Working from home	-	-	3.447 (0.002)	-

3 Perceived infectability
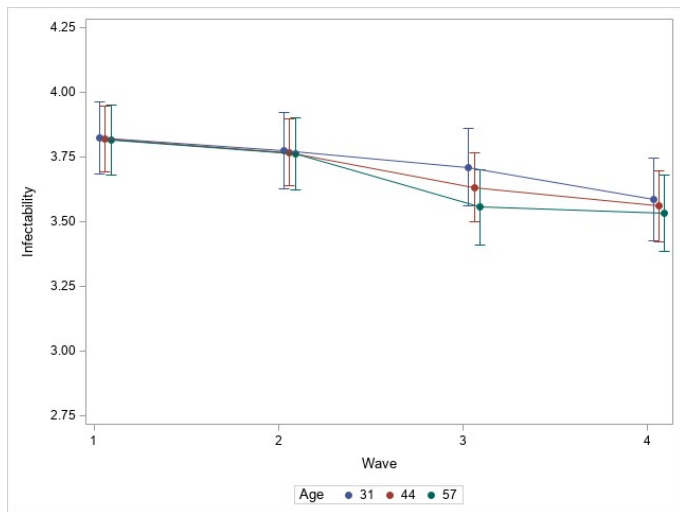
3 Perceived infectability

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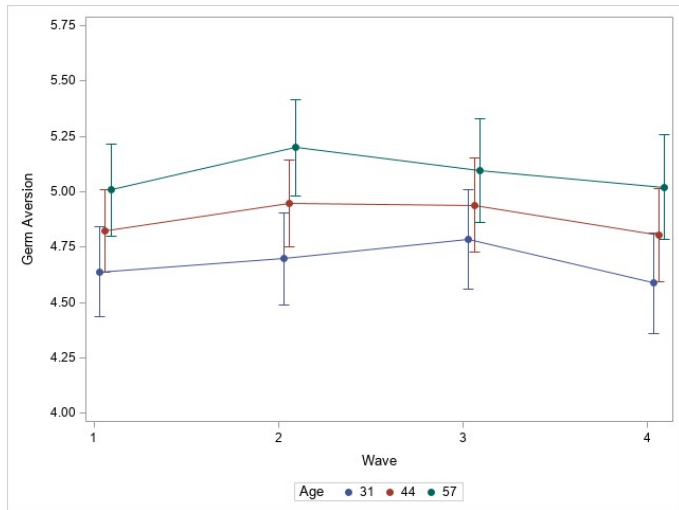
4 Germ aversion
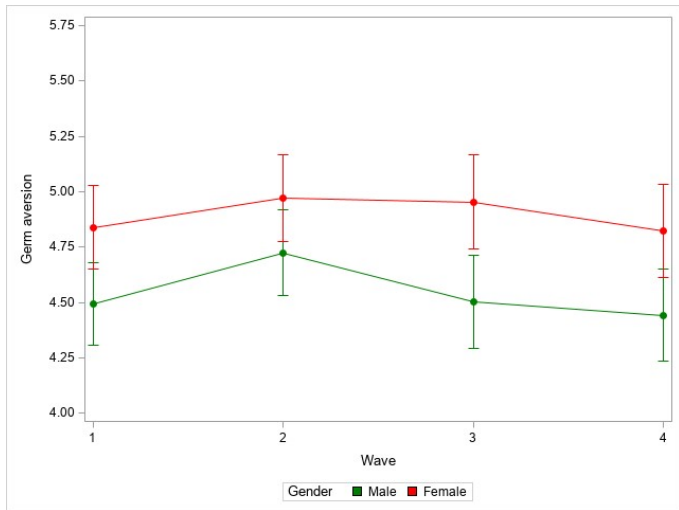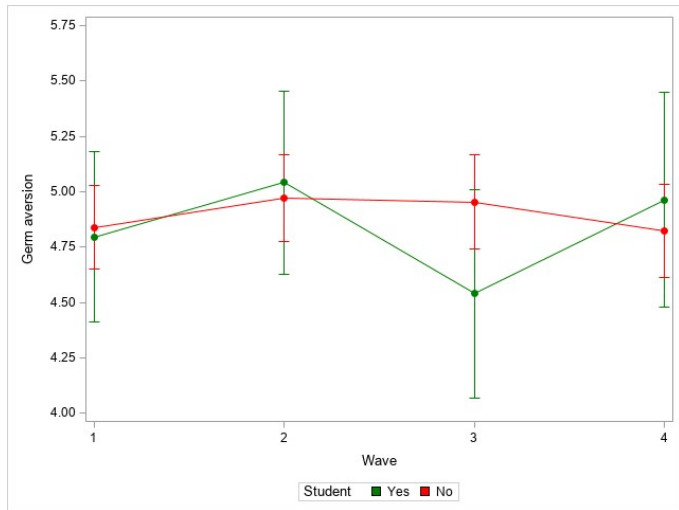
4 Germ aversion
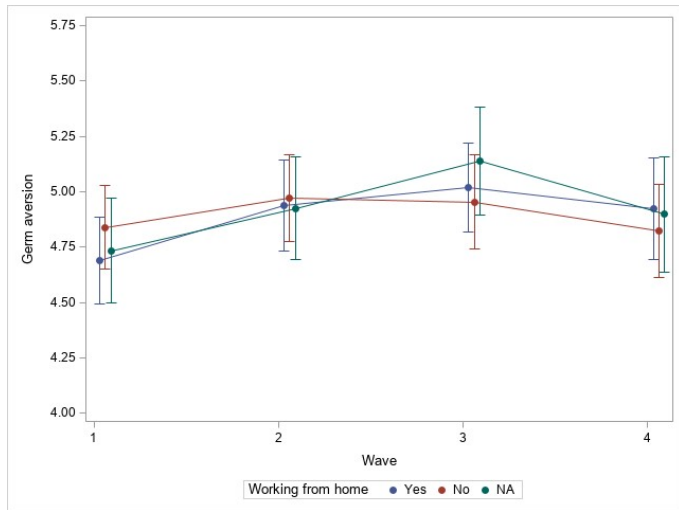
4   Germ aversion

4   Germ aversion

Media profile			Estimate	SE	P-value
Public/quality	Commercial/ popular	Digital/Face to Face			
Low	Low	High	-0.469	0.105	**<.001**
Low	Low	Low	-0.423	0.109	**<.001**
High	Low	High	-0.293	0.104	**0.005**
High	Low	Low	-0.255	0.102	**0.013**
Low	High	Low	-0.143	0.104	0.169
High	High	Low	-0.117	0.107	0.272
High	High	High	-0.069	0.105	0.510
Low	High	High	0	.	.

4 Concluding remarks

▶ Limitations include the non-representativeness of the sample in terms of age and gender

▶ Insights on how individual characteristics may influence the evolution of fears of infection during a pandemic, and how targeted campaigns and information can help reduce these fears

4   More information

Delporte, M., De Coninck, D., d'Haenens, L., Luyts, M., Verbeke, G. Molenberghs, G., & Matthijs, K. (2023). A longitudinal perspective on perceived vulnerability to diseaseduring the COVID-19-pandemic in Belgium. *Health Promotion International*, **38**(2), 1-10.