

Willingness to participate in cohort studies is lower in older, less educated and lower income responders in Bern

Exploring factors associated with participation in a long-term household-based cohort study on pandemic preparedness

BACKGROUND

- **Active cohort studies** have an important role in research about **emerging infections and pandemics**.
- Studying **whole households** is important for research about infectious diseases.
- Identifying **factors associated with willingness to participate** in cohort studies may help pandemic preparedness efforts.

AIM

To investigate factors associated with **willingness to participate in a cohort study** focusing on pandemic preparedness.

METHODS

This online cross-sectional study was part of the preparatory work for the **BEready** (“Bern, get ready”) pandemic preparedness cohort study.

Data collection:

- **15,000 private households** in the canton of Bern selected at random; 3,000 households with 1, 2, 3, 4 or 5+ members, respectively.
- One **person aged 18+ years** randomly selected to be invited to take part in the survey.

Questionnaire:

- **Social and demographic** characteristics.
- **Willingness to take part in a cohort study** for themselves and their children.

Statistical analysis:

- **Inverse probability weighting** at two levels: (1) between responders and non-responders, (2) within responders, between those willing to participate and those unwilling to participate.
- **Frequency/proportion** of characteristics, by household size.
- **Univariable and multivariable logistic regression** models.

RESULTS

The **response rate** to our online survey was **22.6%** (3,394), and in those responders, overall **willingness to participate** in a long-term cohort study was **48.9%** (1,660). Participants in **larger households (5+)** were less likely to join in a long-term cohort study.

Fig. 1: Willingness to participate by household size

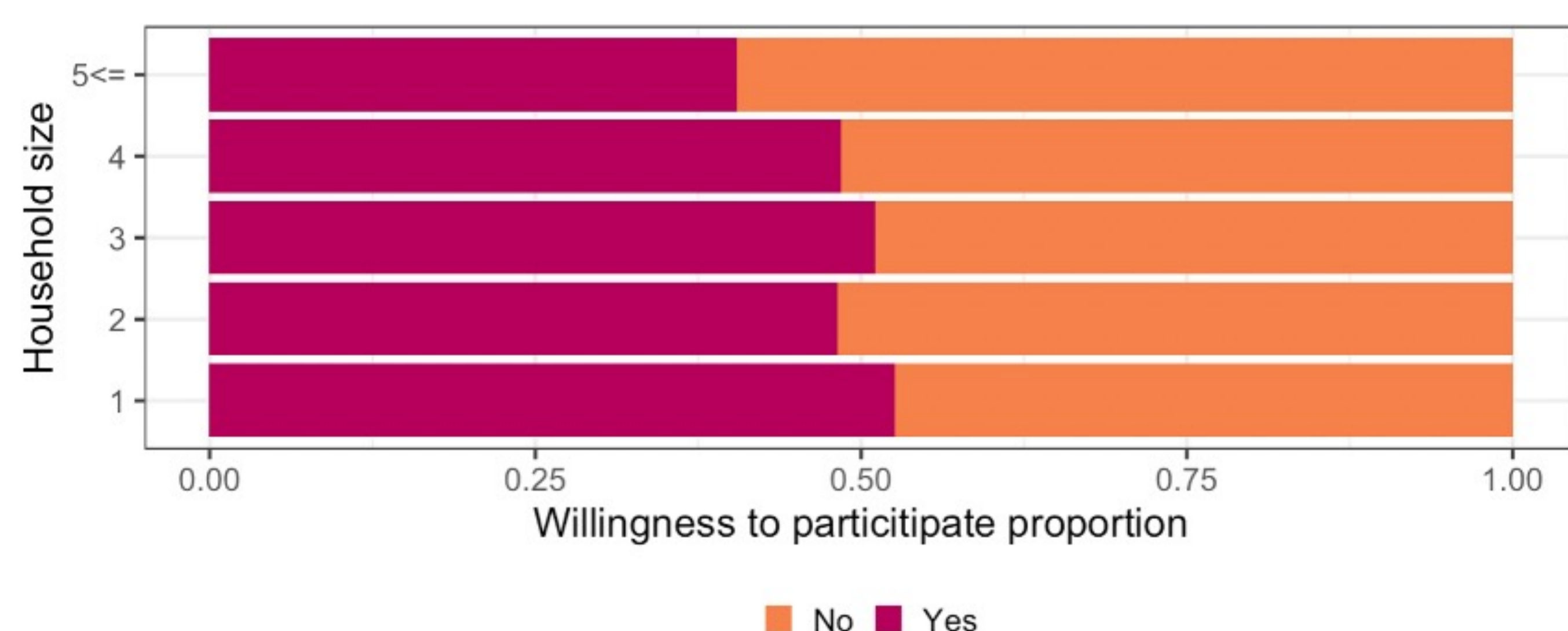
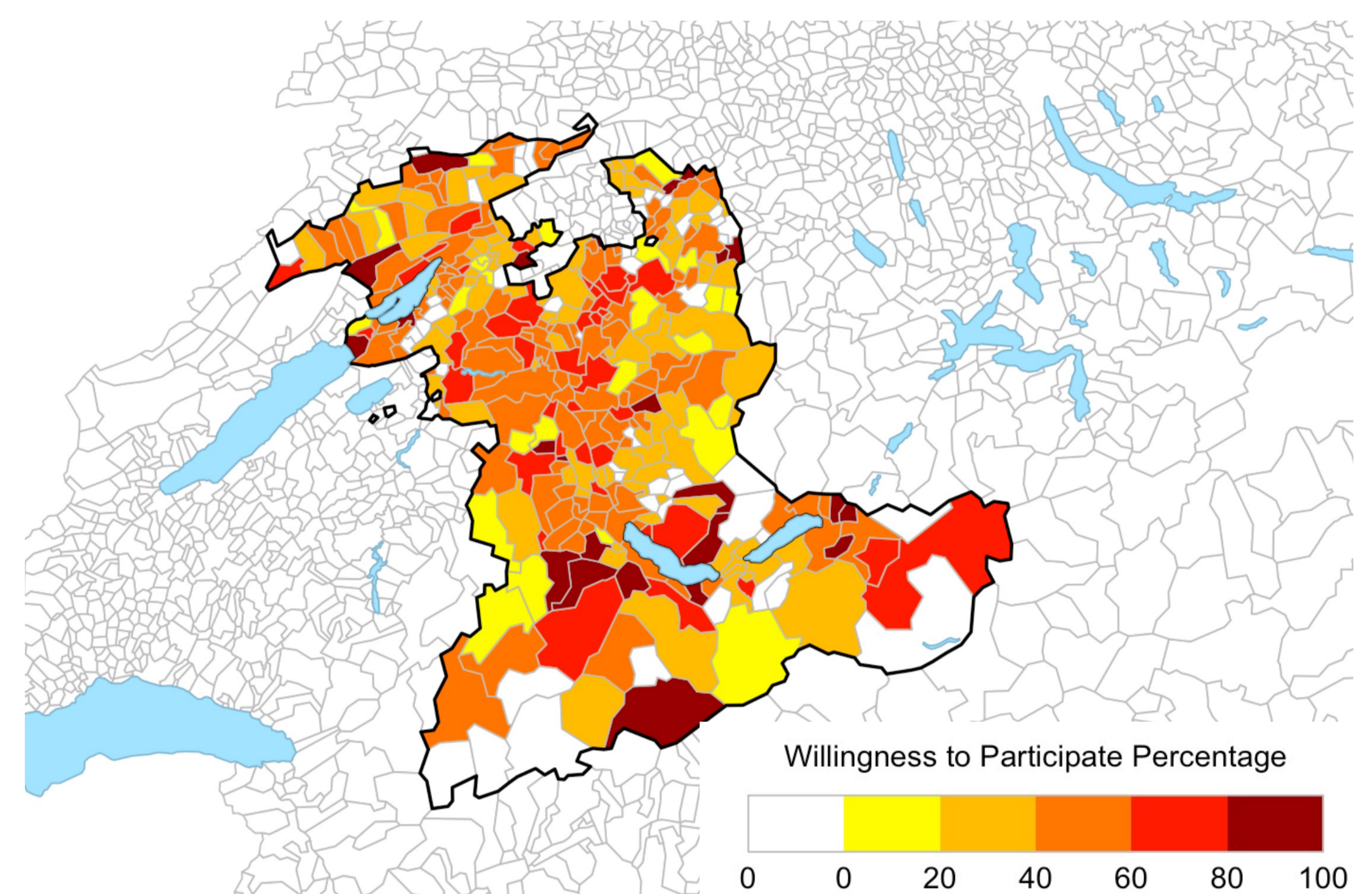


Fig. 2: Canton of Bern, willingness to participate by municipalities.



Willingness to participate was **higher in urban areas**. Some rural areas had a high willingness to participate; however, those generally had smaller sample sizes and were therefore less conclusive.

Table 1: Multivariable logistic regression model, willingness to participate

Characteristics	Adjusted OR	95% CI	p-value
Age	0.99	0.99	0.034
Gender			0.5
Male	-	-	
Female	0.86	0.72, 1.03	
Non-binary	1.79	0.23, 14.3	
No response	0.51	0.10, 2.61	
Education			< 0.001
Compulsory education or less	-	-	
Upper secondary education	1.57	1.20, 2.05	
Tertiary education	2.38	1.78, 3.18	
Other	2.10	0.81, 5.47	
No response	1.06	0.39, 1.38	
Current work situation			0.001
Full-time employee	-	-	
Part-time employee	1.33	1.04, 1.69	
In education	2.17	1.36, 3.46	
Not employed	0.91	0.70, 1.19	
Other	0.70	0.35, 1.39	
No response	0.73	0.39, 1.38	
Household Income			< 0.001
< CHF 3'000	-	-	
CHF 3'000 - CHF 4'500	1.39	0.91, 2.13	
CHF 4'500 - CHF 6'000	1.49	0.99, 2.24	
CHF 6'000 - CHF 9'000	1.72	1.15, 2.57	
CHF 9'000 - CHF 11'000	2.31	1.48, 3.60	
> CHF 11'000	3.12	1.98, 4.92	

OR = odds ratio; CI = confidence intervals

Model adjusted for age, gender, education level, current work situation, income, household location, household size, preferred language of correspondence, and nationality (Swiss, Foreign).

