

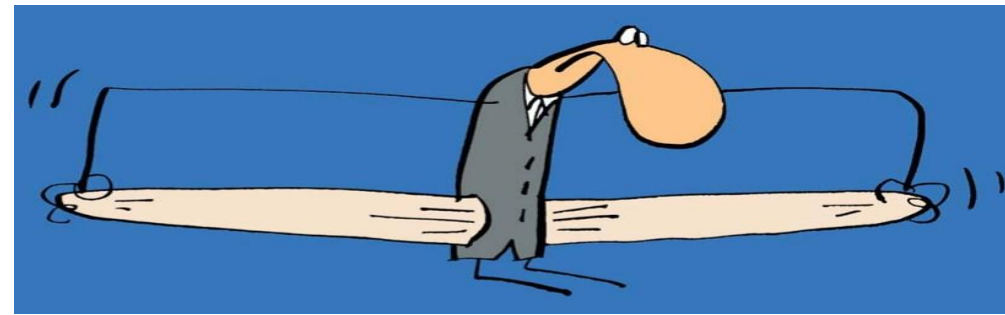
# Over-indebtedness and health problems in Switzerland: a longitudinal analysis



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## Introduction



While negative consequences of poor socioeconomic status (SES) on health have been well documented, the relationship between debt and health remains little studied. Furthermore, most research is cross-sectional and focuses on mental health and well-being.

Yet, household over-indebtedness is a growing concern in European countries. Previous research shows that debt may be a good predictor of poor health independently of other measures of SES like income, education and occupation. Research converges to conclude that arrears of payment are a highly problematic type of debt and a reliable indicator of over-indebtedness.

We focus our **analysis on the longitudinal association between arrears and on four self-reported health problems (insomnia, weakness, back pain, and headaches).**

## The Swiss Context



In Switzerland, payment arrears are particularly widespread. The latest figures from the Federal Statistical Office show that almost one in seven people (13.5%) in Switzerland live in a household with at least one arrears payment. The most common arrears are tax debts (7,5%) and health insurance premiums (5,5%). This situation is explained by the specificities of the Swiss tax and compulsory health insurance system. For most residents, taxes and health insurance premiums are not deducted directly from their salary as in other countries but paid individually.

## Purpose and Hypothesis

To investigate (a) the association between arrears and four indicators of self-reported health problems and (b) the impact of the onset of arrears on these four health indicators. We hypothesize that arrears are associated with higher levels of health problems and that these associations will hold even when controlling for our analytical models, because the effects of arrears in terms of financial hardship, psychosocial stress, and stigma are not fully captured by socioeconomic and health status indicators.

## Methods

### Data and Measures:

The **Swiss Household Panel**: an annual multi-thematic survey based on a random sample representative of the general population. We use data from wave 6 (2004) to wave 21 (2019). Sample size varies from a maximum of 129'810 observations (20'022 cases) to a minimum of 33'695 complete observations (3'613 cases).

- **Independent variable: arrears** (presence of arrears in the household in the last 12 months-> 1=no; 2=sometimes; 3=often).
- **Dependent variables: health problems** (self-reported indicators of insomnia, weakness, back pain and headaches during the last 4 weeks-> 1=not at all + somewhat vs 2=very much).
- **Control variables:** age of respondent, household income, labour force %, ability to save money, number of children, home ownership, chronic illness, health impediment
- **Invariant variables:** sex, nationality, language region of residence, birth cohort, education level, tertile of the household's income.

### Data analysis:

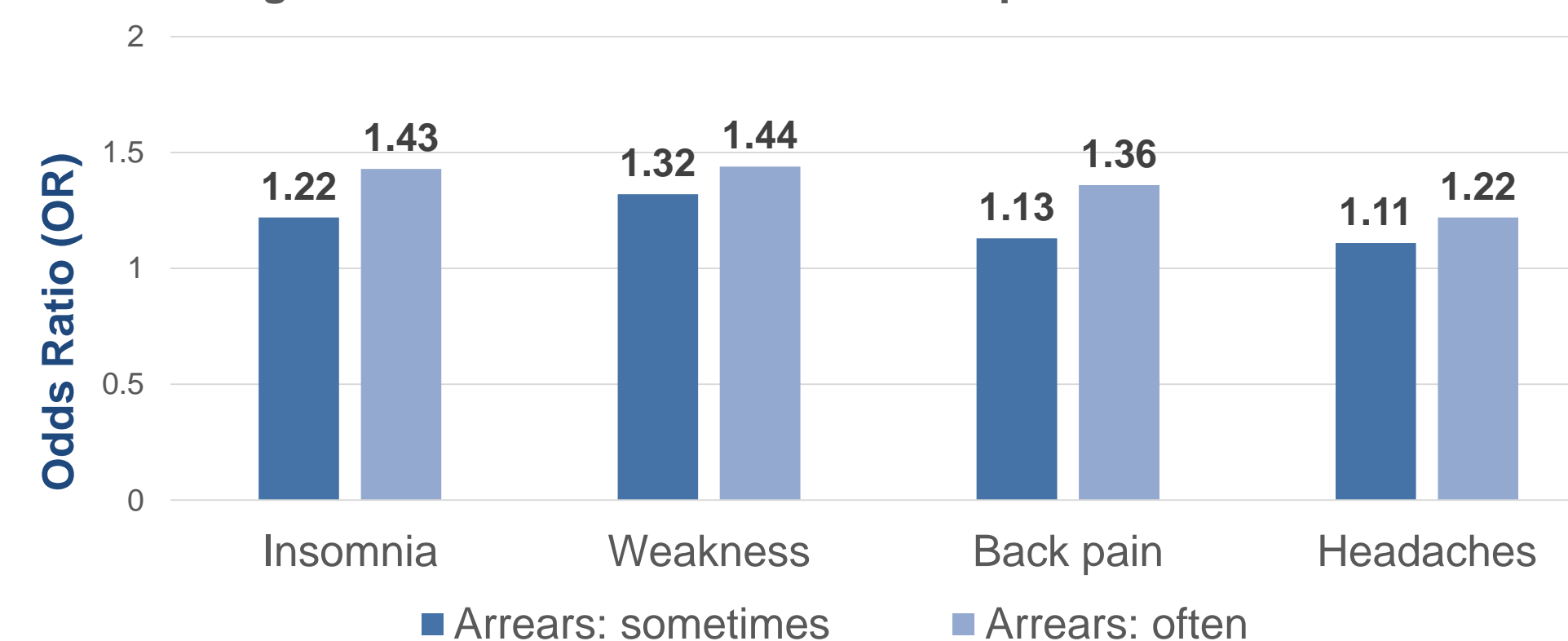
**Between-Model:** binary logistic regressions estimated by generalized estimating equations (GEE) to isolate the intergroup variance and to focus on the differences between individuals to map the parameters related to health problems.

**Within-Model :** binary logistic regression models with fixed effects for panel data to isolate the within-group variance and assess the impact of arrears on health problems over the life course of a given individual

## Results: Between-Model

Our results show very consistently that **arrears are associated with a higher risk for all 4 health problems.** Even when controlling by our two health parameters (chronic illness and health impediment), all results are significant at the 0.01 level. **The more frequent the arrears, the greater the health problems.**

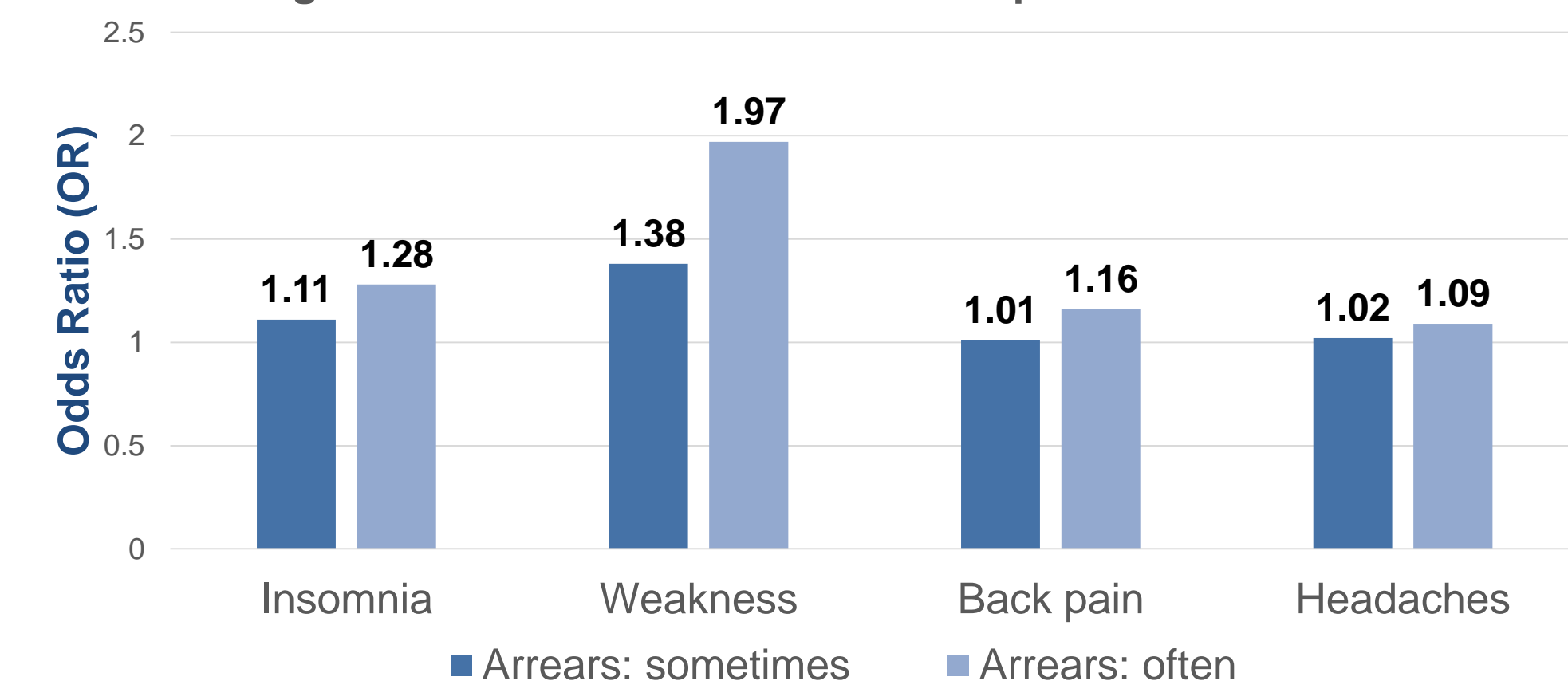
Fig. 1: Over-indebtedness and health problems - between



## Results: Within-Model

Our results with the within-model are a little more nuanced. Over the course of a given individual's trajectory, **the onset of arrears increases the risk of insomnia and weakness**, controlling for health status and other parameters varying over time. For these two health problems the results are significant at the 0.05 level (except for insomnia with arrears "sometimes" which is at the limit with 0.066). As before, the higher the frequency of arrears, the greater the negative impact on health problems. For back pain and headaches, the results are in the same direction but are above the 0.05 significance level.

Fig. 2: Over-indebtedness and health problems - within



## Conclusion

Based on observational and self-reported data, we confirm the link between over-indebtedness and health problems.

The actual effect of arrears is likely to be greater, however, due to selective attrition from the panel, which tends to under-represent respondents with the most financial and health problems.

**Our findings highlight the importance of incorporating measures of over-indebtedness in both health inequalities research and health care practice.**

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