

# The power of communities: Facing (chronic) disaster

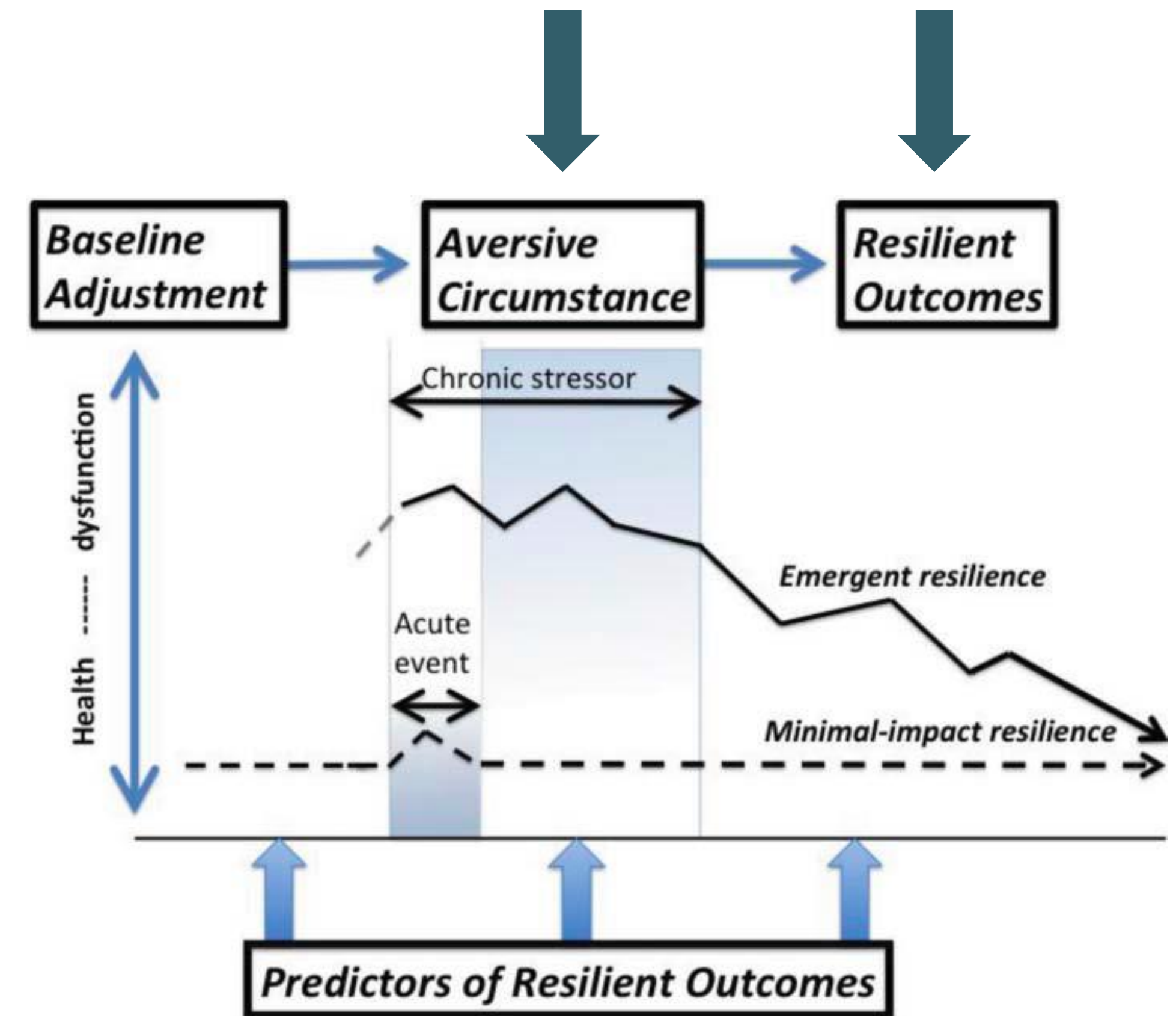
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# Resilience in the face of chronic disaster

- A capacity for successful adaptation in the face of disturbance, stress, or adversity (Norris et al., 2008)
  - Ability/process rather than outcome
  - Adaptability rather than stability
- Resilience at different levels:
  - Individual
  - Community
  - Organization

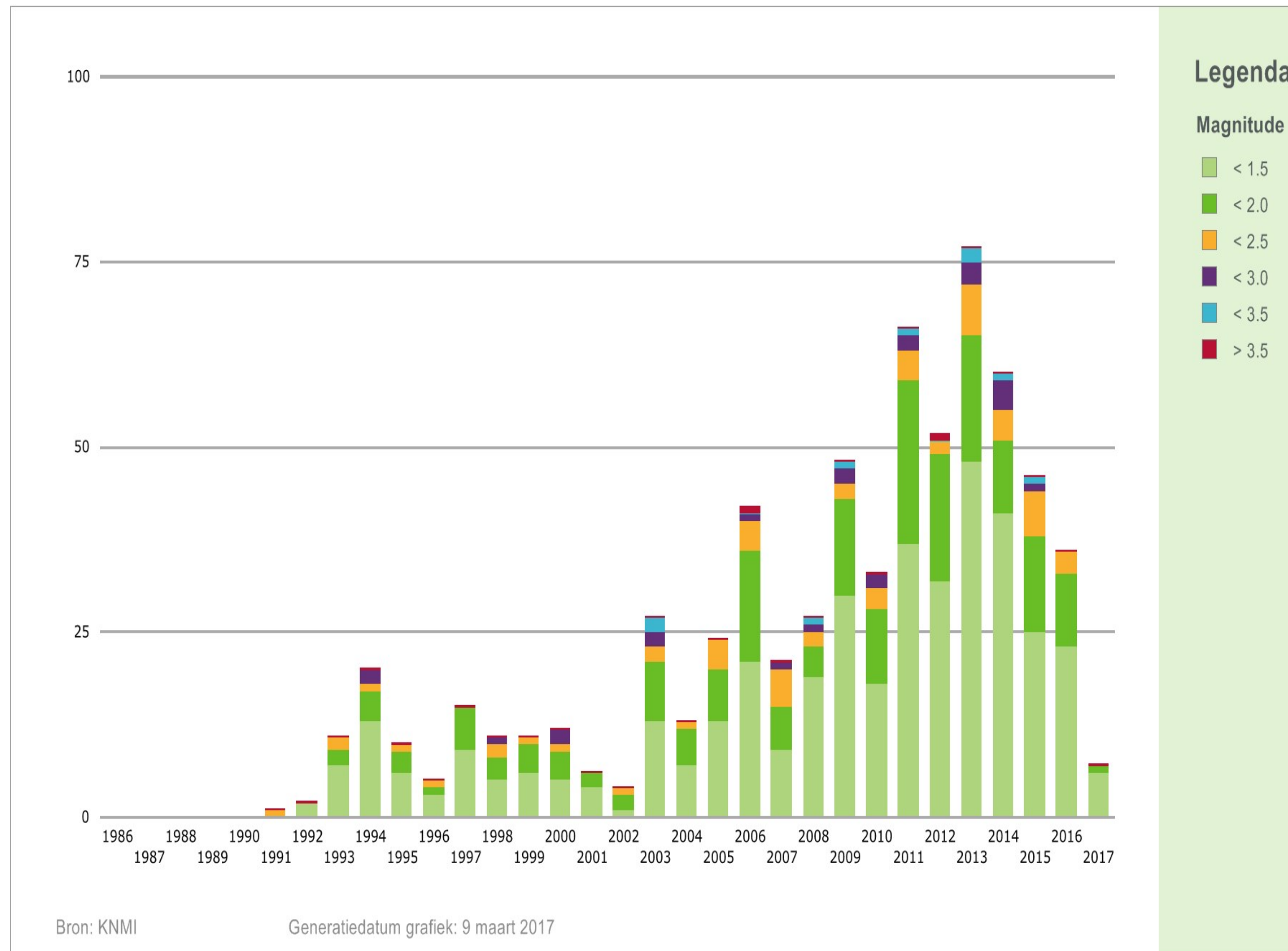


# This talk

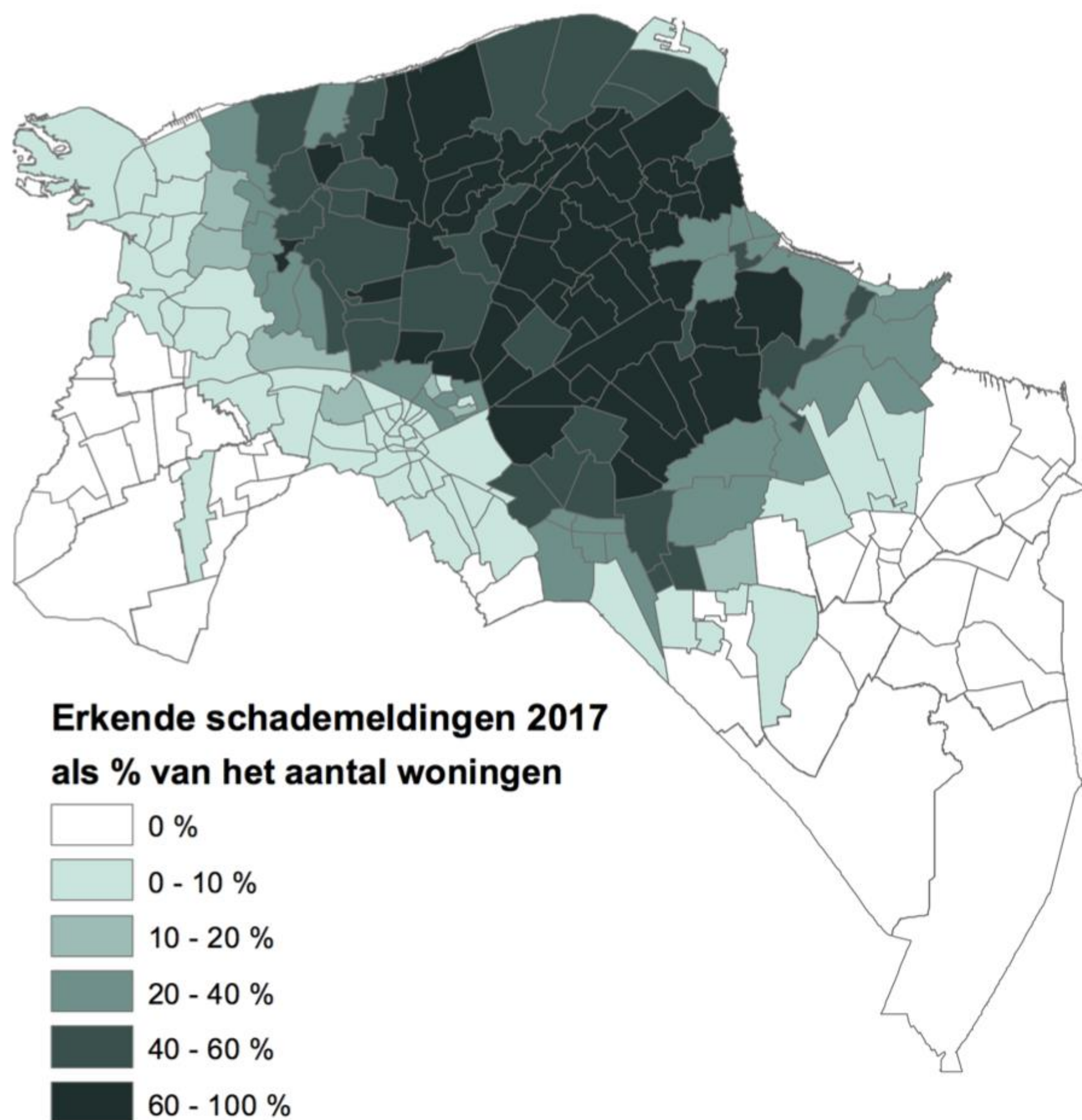
1. What is individual and community level resilience
2. Individual level resilience
3. The power of communities



# Chronic adversity: the Groningen gas extraction



# Extent of problem

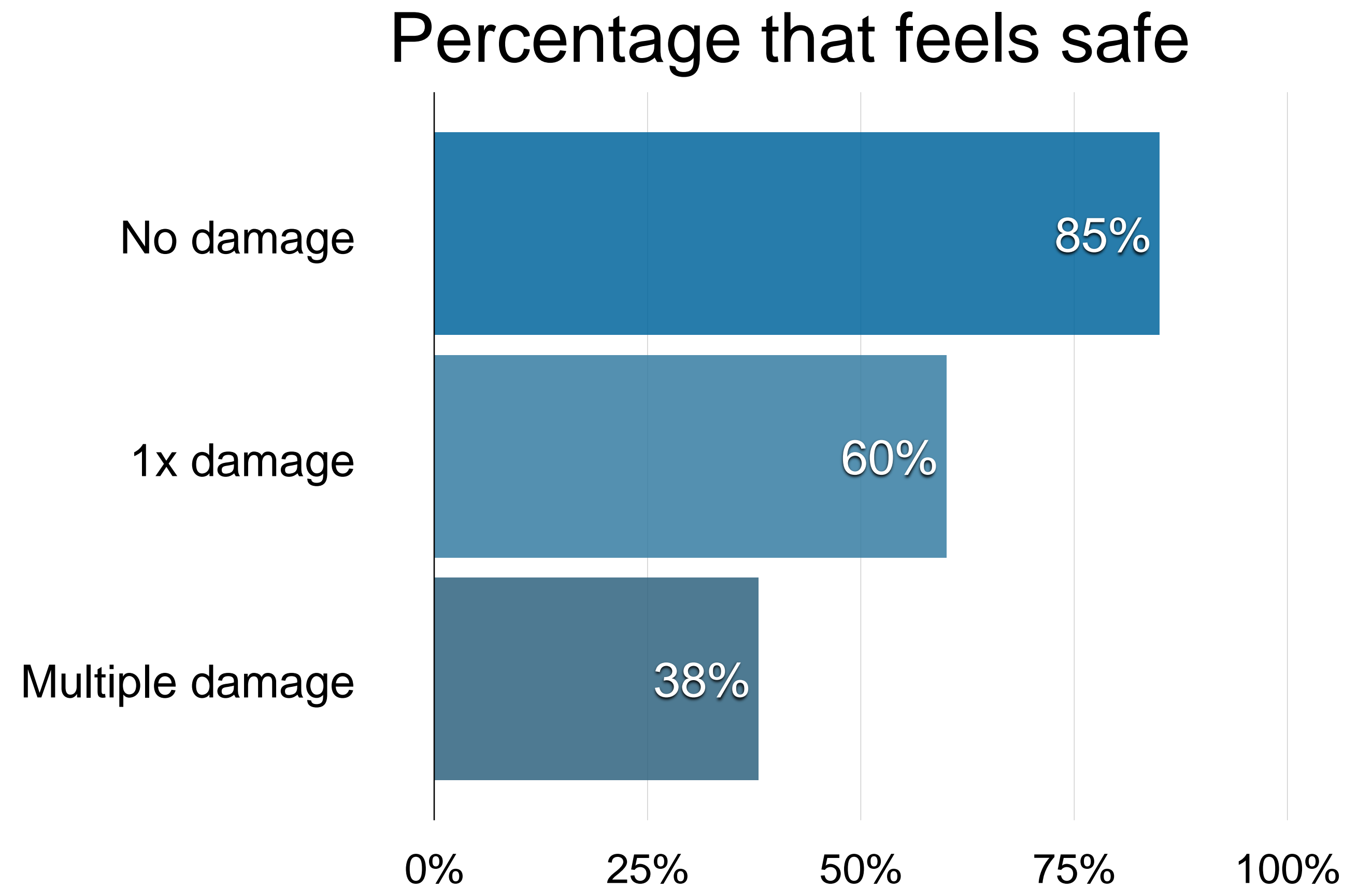


**Figuur 2:** Aantal erkende schademeldingen 2017

- Gas extraction has negative impact on almost entire province of Groningen
- 410,000 residents of the province of Groningen are exposed to induced earthquakes
- 134.363 adults have damage to their property. With children:  $\pm$  170.000
- 68.343 have multiple damages. With children:  $\pm$  85.000

# Challenges to resilience

- Undermines safety perceptions
- Affects all parts of the population regardless of age, SES, work or living situation etc.

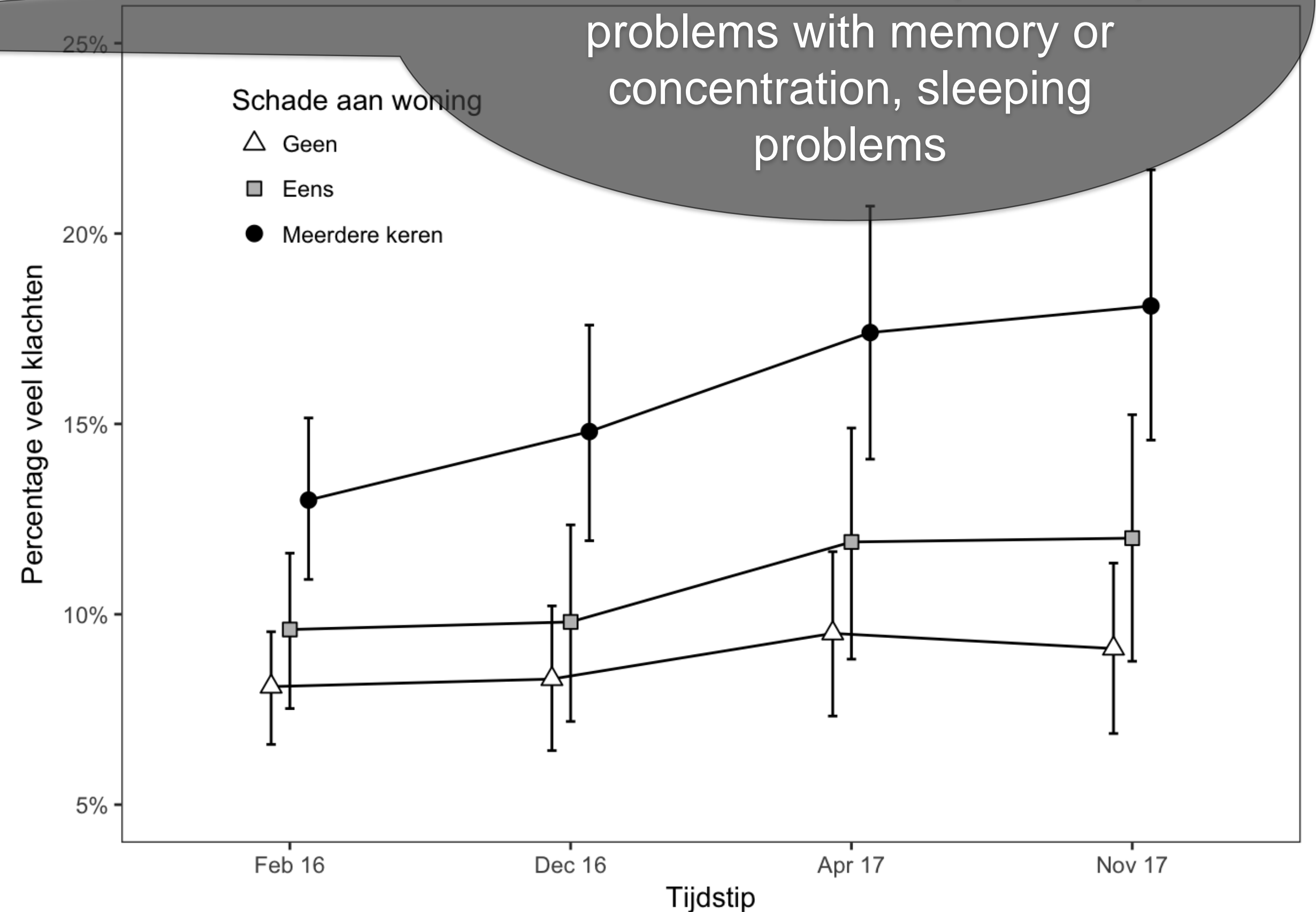


Question: how safe have you felt in the place you live the past four weeks – in het context of the gas extraction? (1= very unsafe, 5 = very safe)

# Undermines individual-level resilience

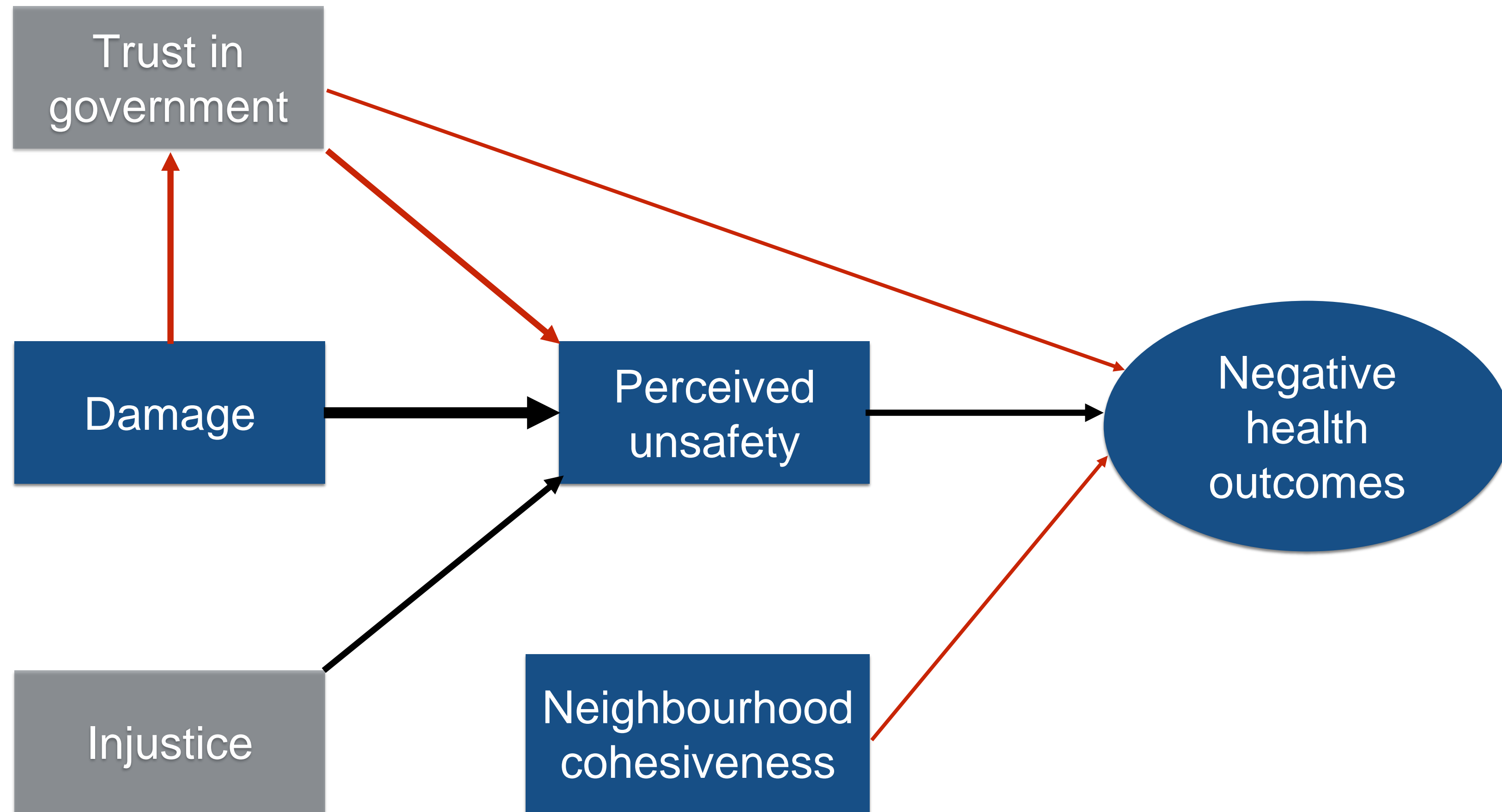
- Significant decrease of (mental) health among those with multiple damages to property
- Causal relationship (pre versus 'post' gas extraction)
- Multiple damages: 85.000 / acute health problems: 10.000

Headaches, stomach problems, palpitations, nervous or anxious, irritable, problems with memory or concentration, sleeping problems



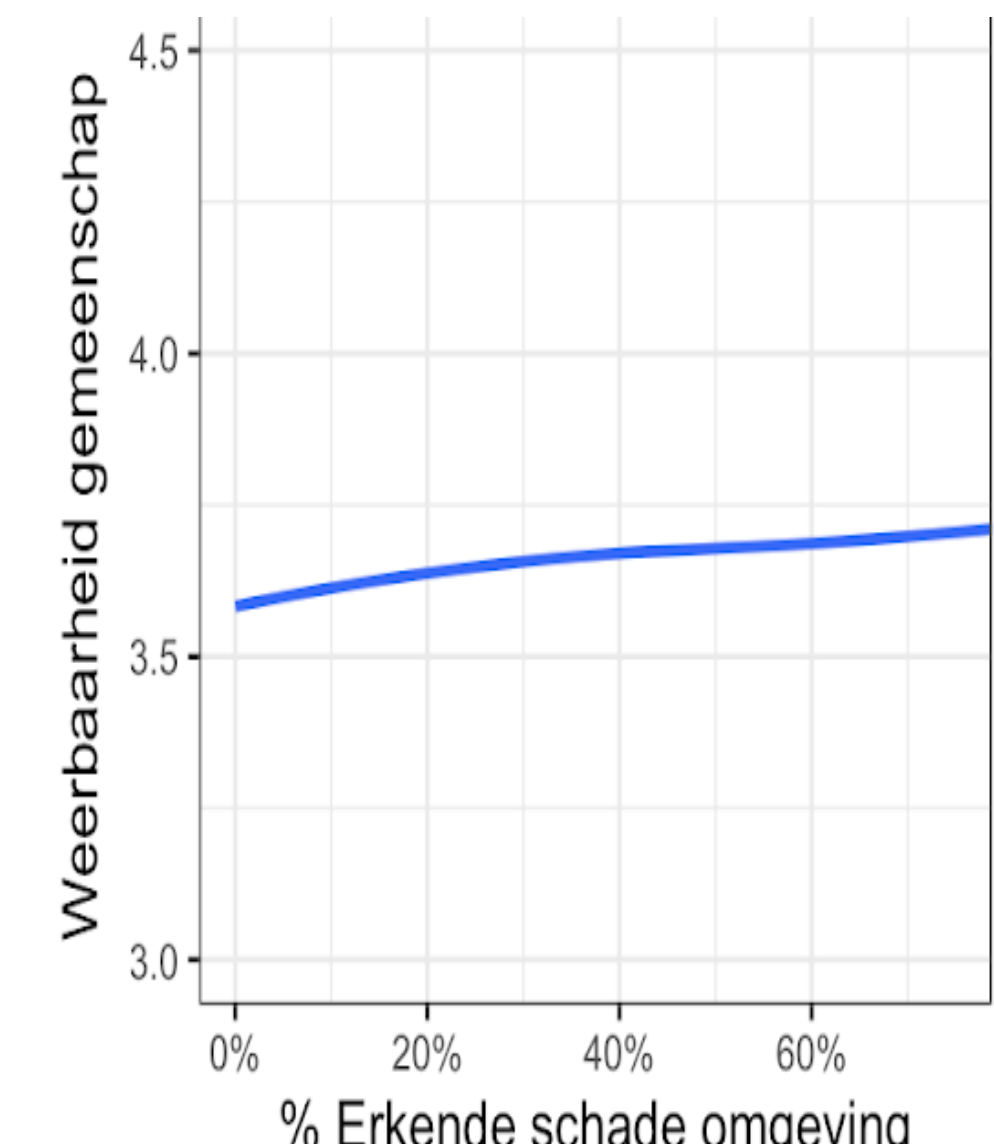
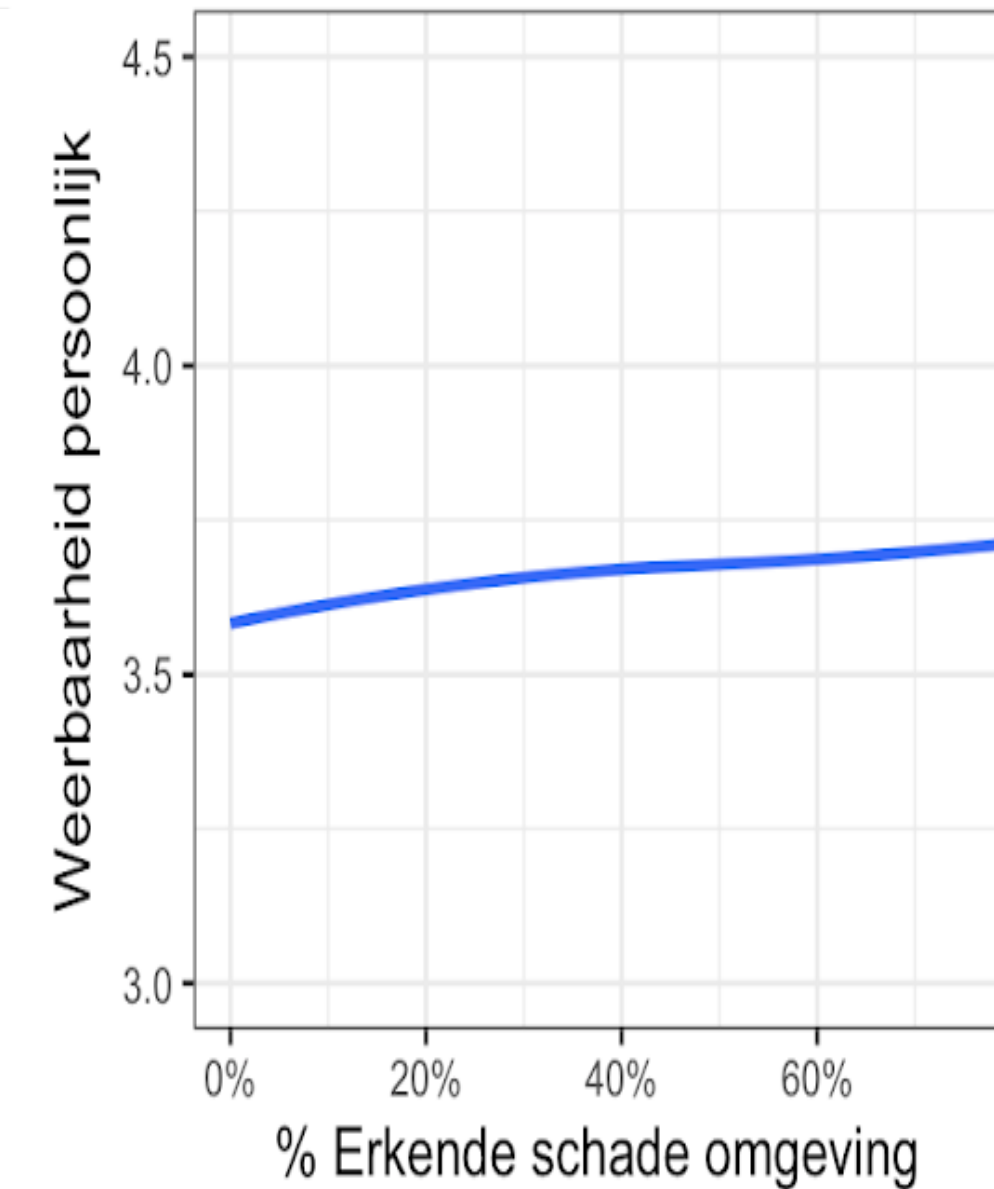


# Model of main findings



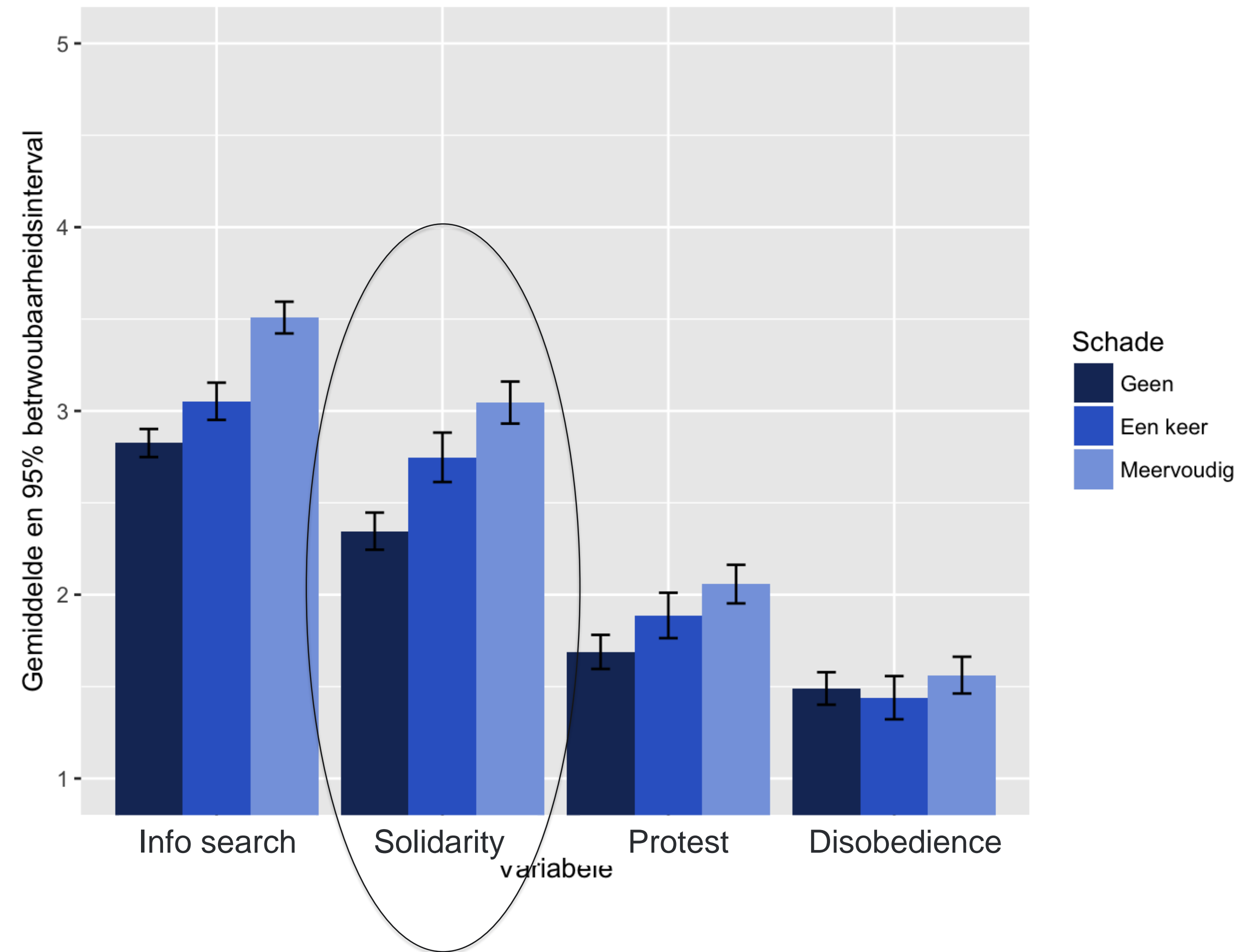
# Individual & community level resilience

- Perceived ability to adjust (adapted from Sampson et al., 1997)
- Your neighbourhood or village changes drastically:
- How would **you** respond to such a change?
- How would **inhabitants of your village/neighbourhood** respond?
- **Example items:** *Show little response; help others (e.g., if there are neighbours who find this difficult); find the strength (together/as individual) to deal with this change*



# Community resilience

- Groninger 'volksaard' (character)?
- Active communities!
- People may not be protesting that much but they are:
  - Seeking a lot of information
  - **Helping each other**



# Conclusion

- Gas extraction undermines mental health
- **The power of groups & communities** (Drury et al., 2009; Jetten et al., 2012; Rime, 2009; Stroebe et al., 2018; van Zomeren et al., 2008):
  - Buffer health
  - Resilience in the face of disaster
  - Make proactive!

# Implications

- Increase individual level resilience: safety and health!
- Recognize the power of communities:
  - Bottom-up approaches needed – with inhabitants
- Take into account challenges/threats to communities
  - Damage procedure
  - Fortification of buildings



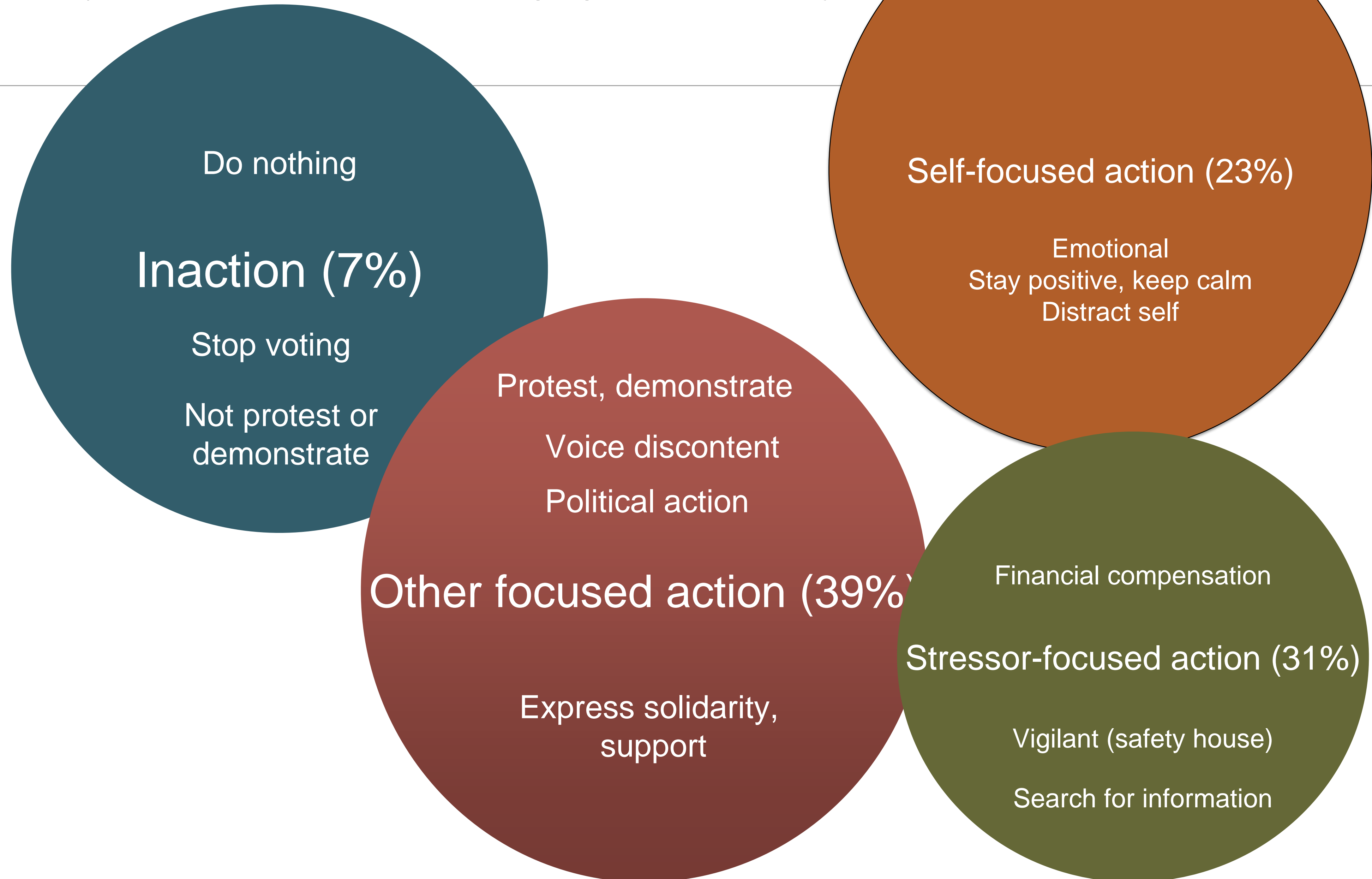
# Questions, comments?

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*[www.groningsperspectief.nl](http://www.groningsperspectief.nl) (English  
summary)*

# What actions can you take?

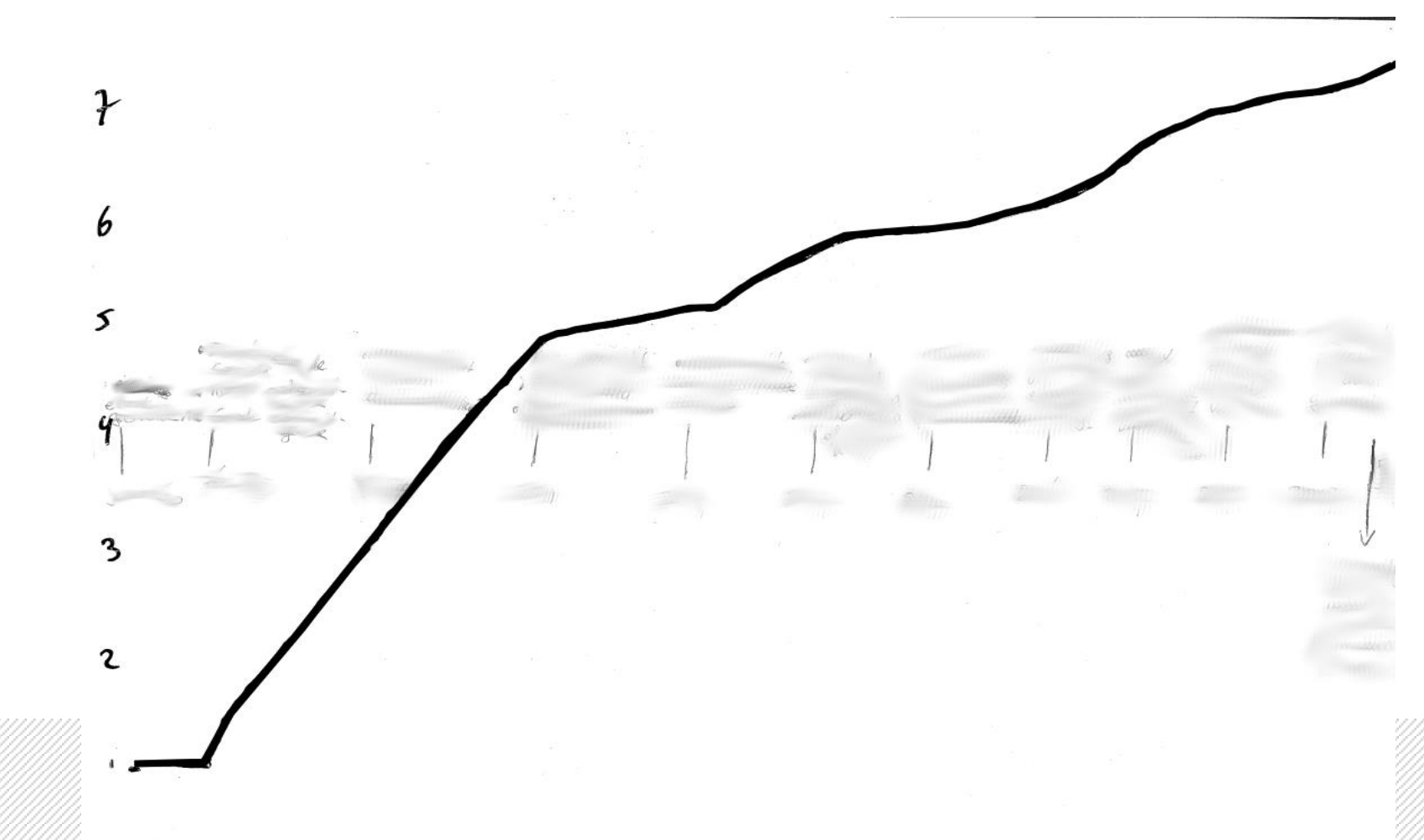
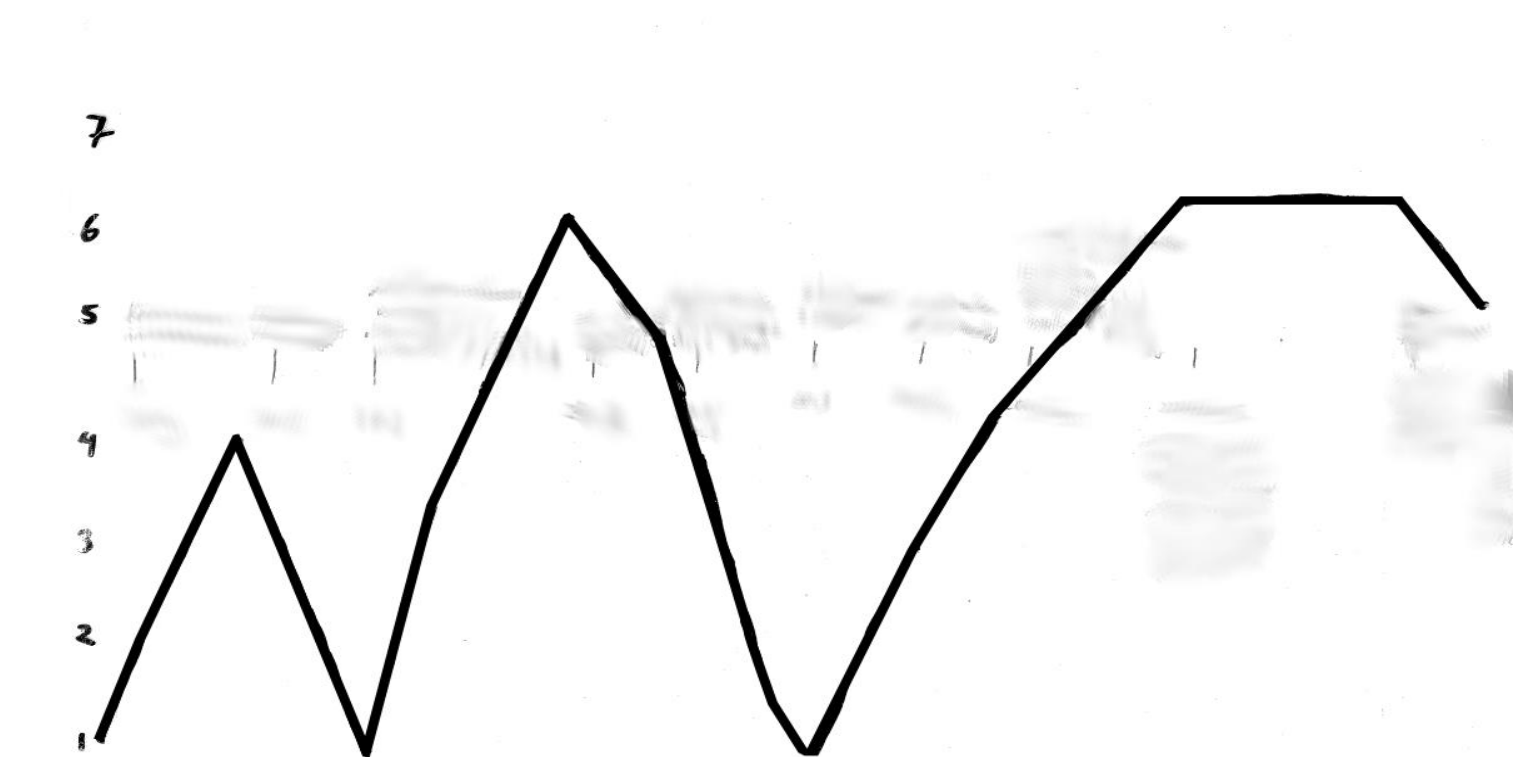
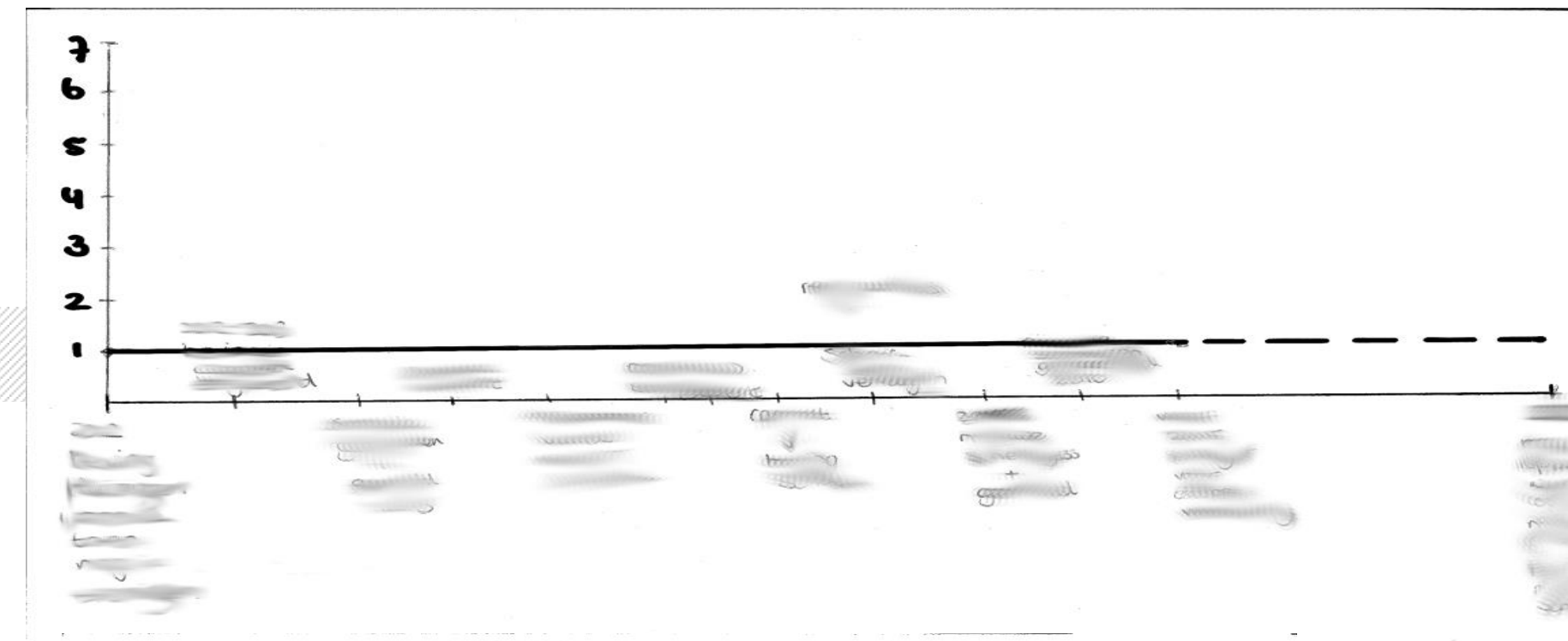
(Stroebe, Postmes & Roos, in prep, N=164, **N=21**)





# Stress and coping

- 60 interviews
- Timeline: 'gas' related life events
- 3 patterns of stress:
  1. Low (27)
  2. Oscillating (25)
  3. Increasing (7)
- No 'objective' differences





# Disaster

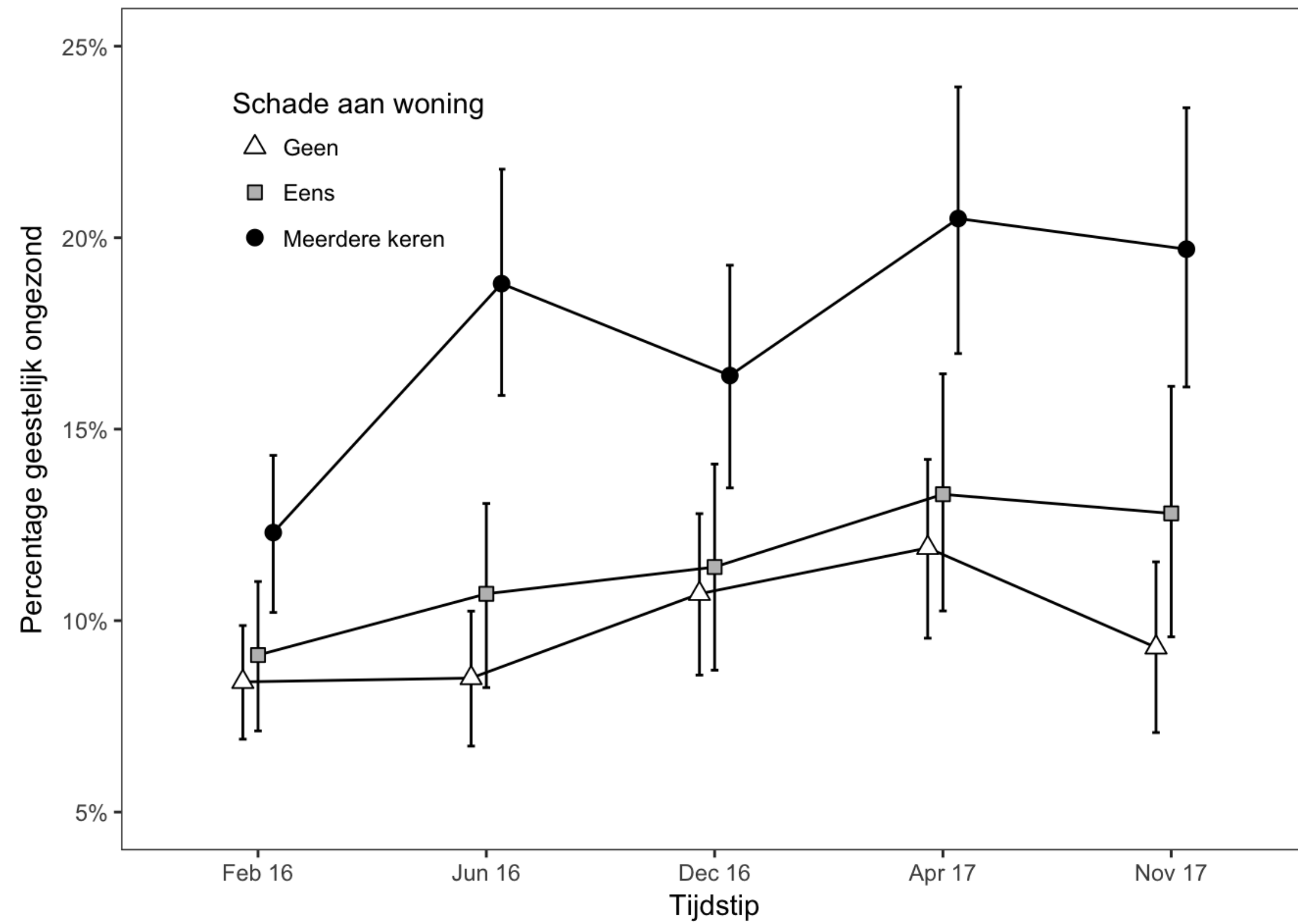
- *Disaster*: A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. (UNISIDR)



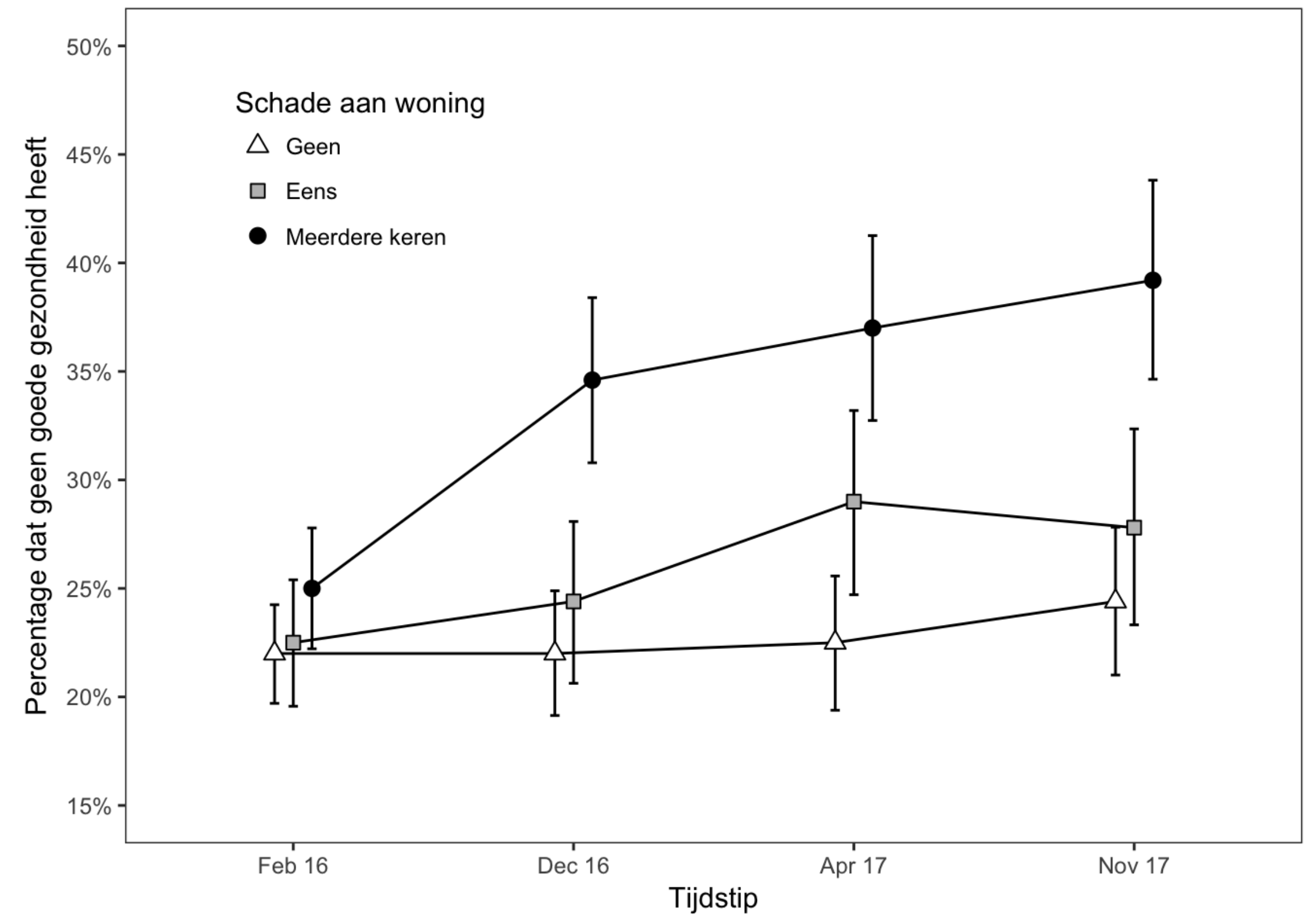
- Gronings Perspectief (jan. 2016 – heden)
  - >2.150 respondenten uit Groningen
  - Gezondheid, stress, veiligheid, vertrouwen, toekomstperspectief
- Lifelines (sept. 2016)
  - 2.912 respondenten (niet representatief) uit Noord Nederland
  - Gezondheid, stress
- GGD gezondheidsmonitor
  - 16.284 respondenten, representatief
  - Gezondheid, evaluatie woonomgeving



## Depressive symptoms



## Perceived health



# Gezondheid

## Verhoogd gezondheidsrisico voor mensen met schade

hoofdpijn, maagklachten,  
hartkloppingen, nerveus of  
gespannen, prikkelbaarheid,  
geheugen- of  
concentratieproblemen,  
slaapproblemen

	Geen schade	1x schade	Meervoudige schade	Totaal
Aantal inwoners	328.461	66.020	68.343	
Geschat % geen goede gezondheid	22.9%	24.3%	27.6%	
Toename t.o.v. geen schade		1.4%	4.7%	
Geschat aantal		924	3.212	4.136
Geschat % met veel gezondheidsklachten	10.3%	13.4%	18.5%	
Toename t.o.v. geen schade		3.1%	8.2%	
Geschat aantal		2.031	5.589	7.620
Geschat % met hoog risico op psy. stoornis	4.9%	5.6%	6.8%	
Toename t.o.v. geen schade		0.7%	1.9%	
Geschat aantal		486	1.314	1.800

**Tabel 5:** Geschatte percentages en aantallen met verhoogd gezondheidsrisico