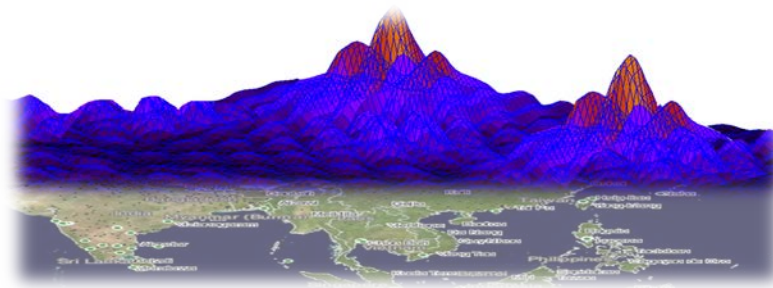


# Development of GPS-tailored questionnaires to derive measures for psychological support during the corona-crisis

Melanie Platz



# COVID-19 and mental health

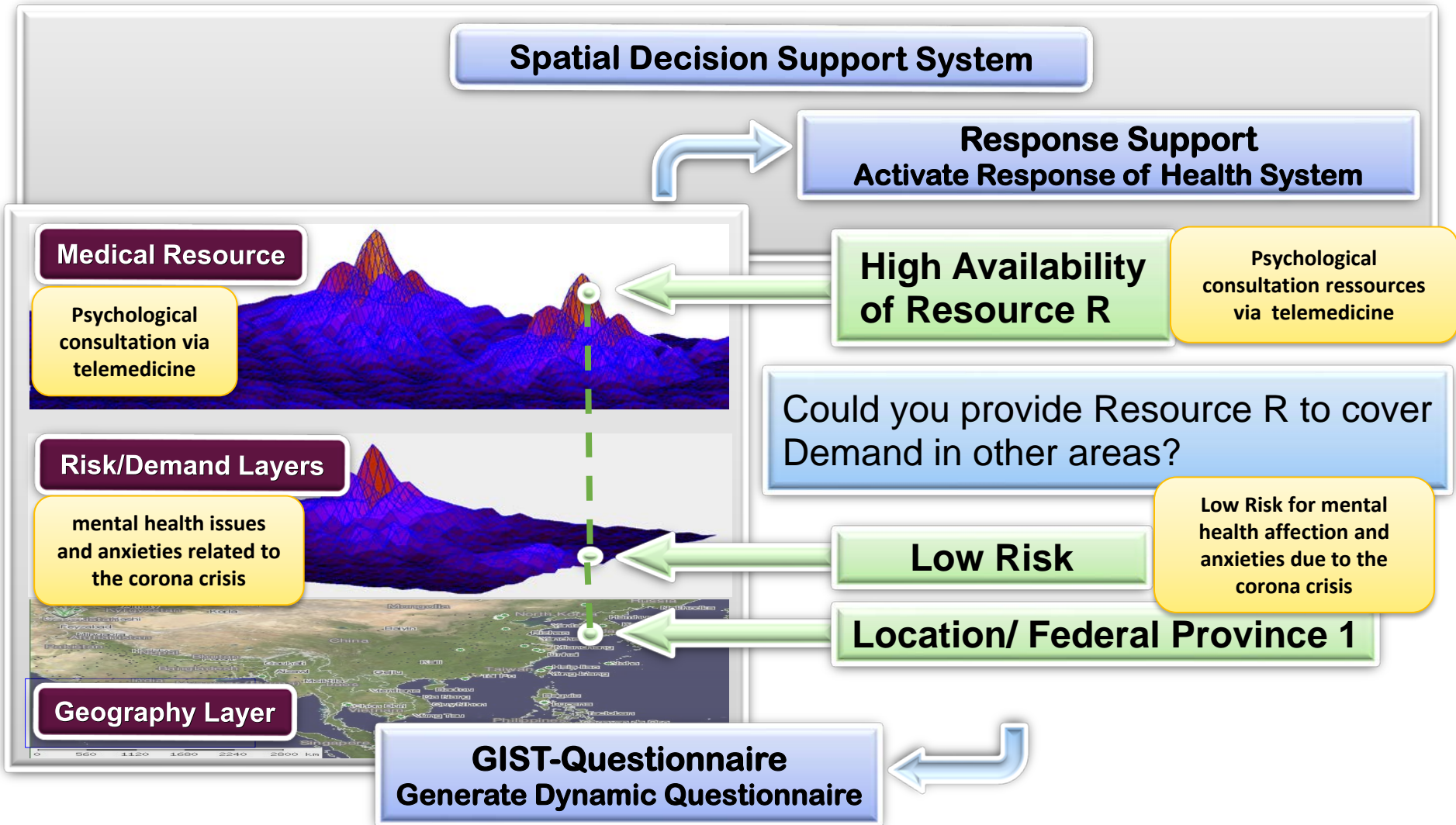
“

[...] **anxiety** and **depression** (16–28%) and **self-reported stress** (8%) are common psychological reactions to the COVID-19 pandemic [...].

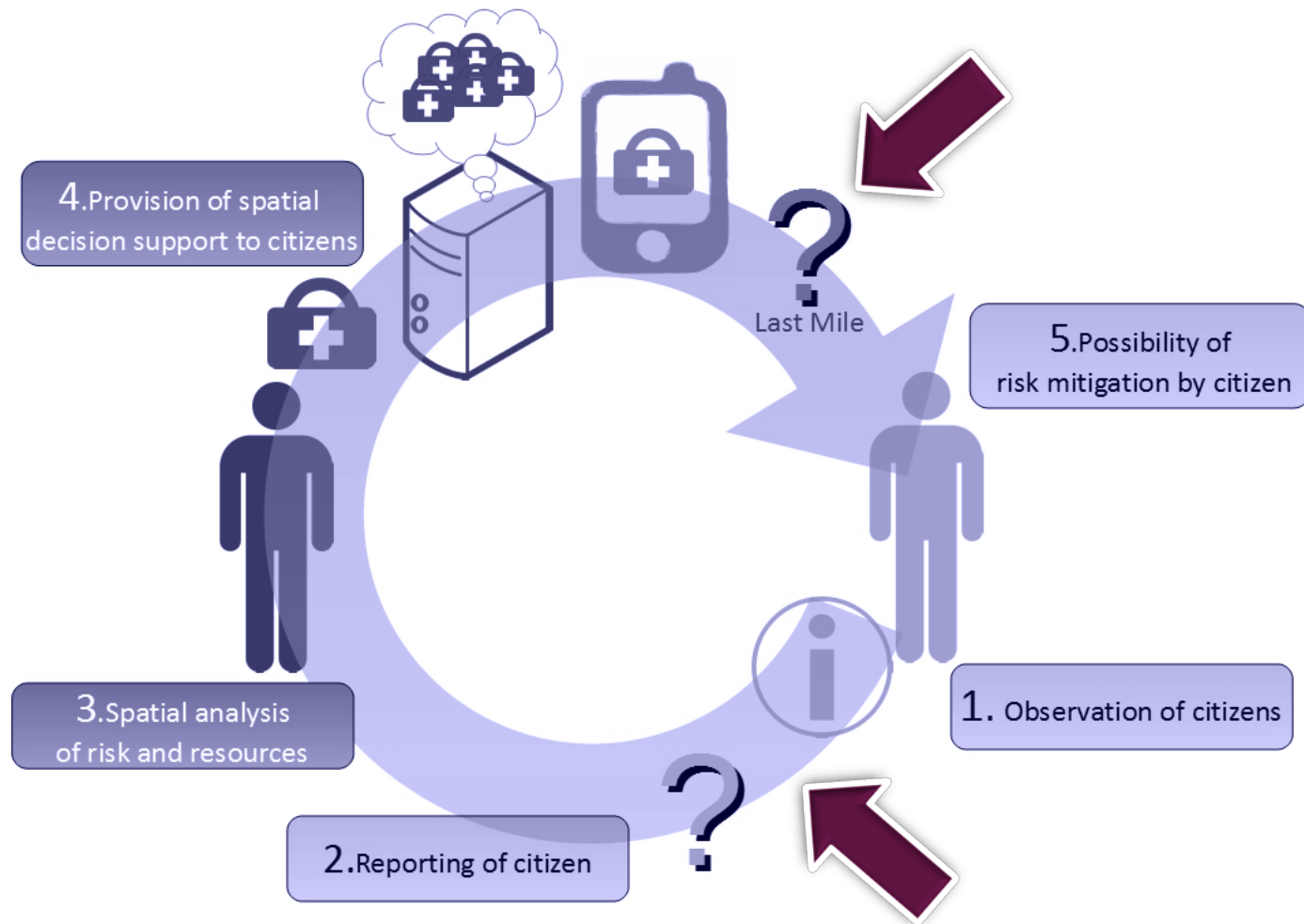
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- Rajkumar (2020)

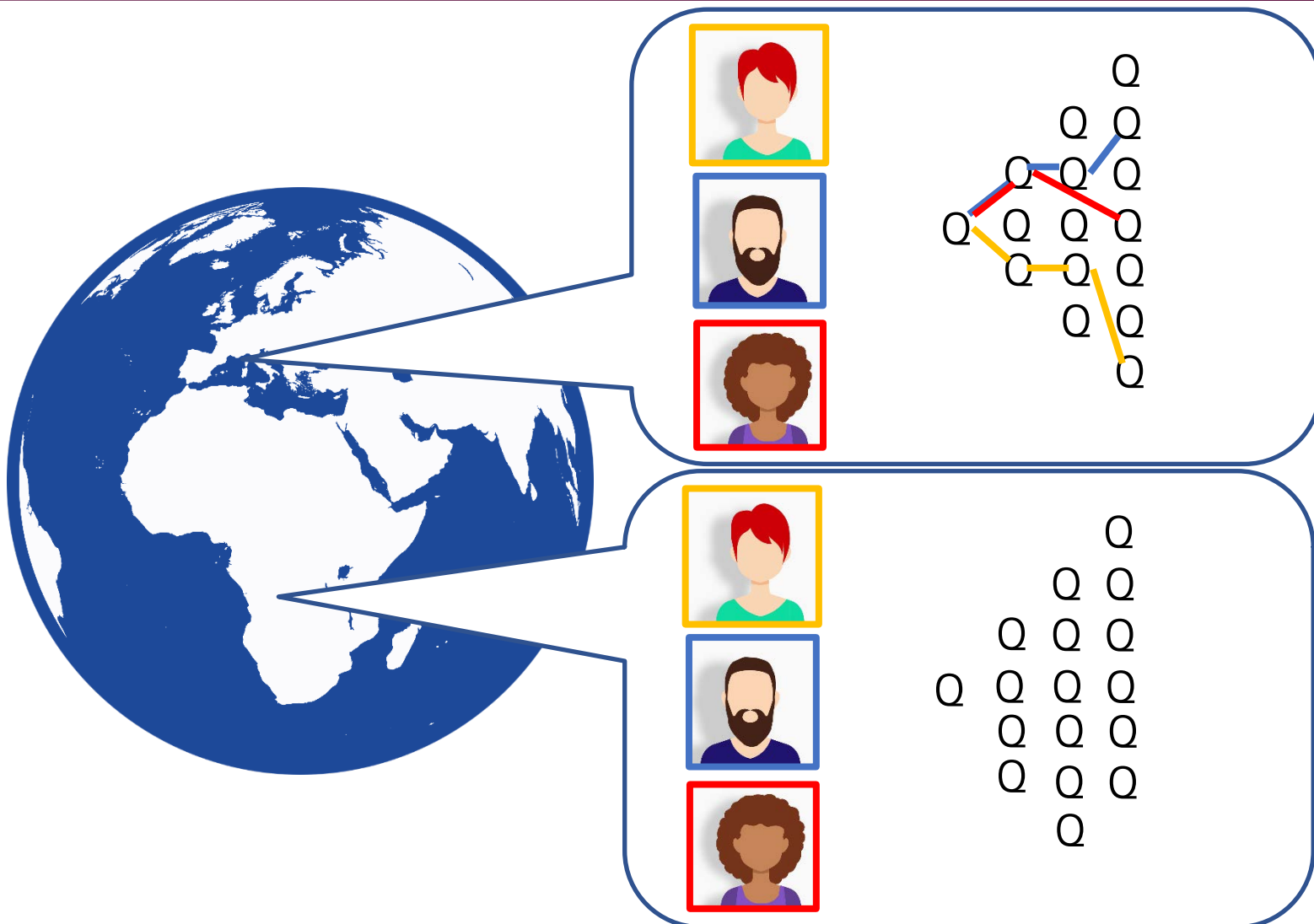
# GIST-Q & tailored Response



# Communication Cycle



# GIST-Q & Adaptive Testing





Impact of the Covid 19 pandemic on teaching and learning

# STUDY ON DISTANCE LEARNING IN TYROL

VR Prof. Mag. Dr. Irmgard Plattner | HS-Prof. Dr. Melanie Platz  
IL HS-Prof. Claus Oberhauser, PhD | Prof. Dr. Sebastian Goreth  
IL Prof. Robert Mader, Msc | Dr. Christian Vollmer

# Target Group and Response Rate

A teacher is a person at risk, but also a disseminator.

- Online Questionnaire via SoSci Survey<sup>1</sup>
- Approx. 25 min processing time<sup>2</sup>
- Target group: 11.197 teachers of all school types<sup>3</sup> in Tyrol (Austria)
- **N = 2.317** (20.7% response)
- Anonymous data evaluation



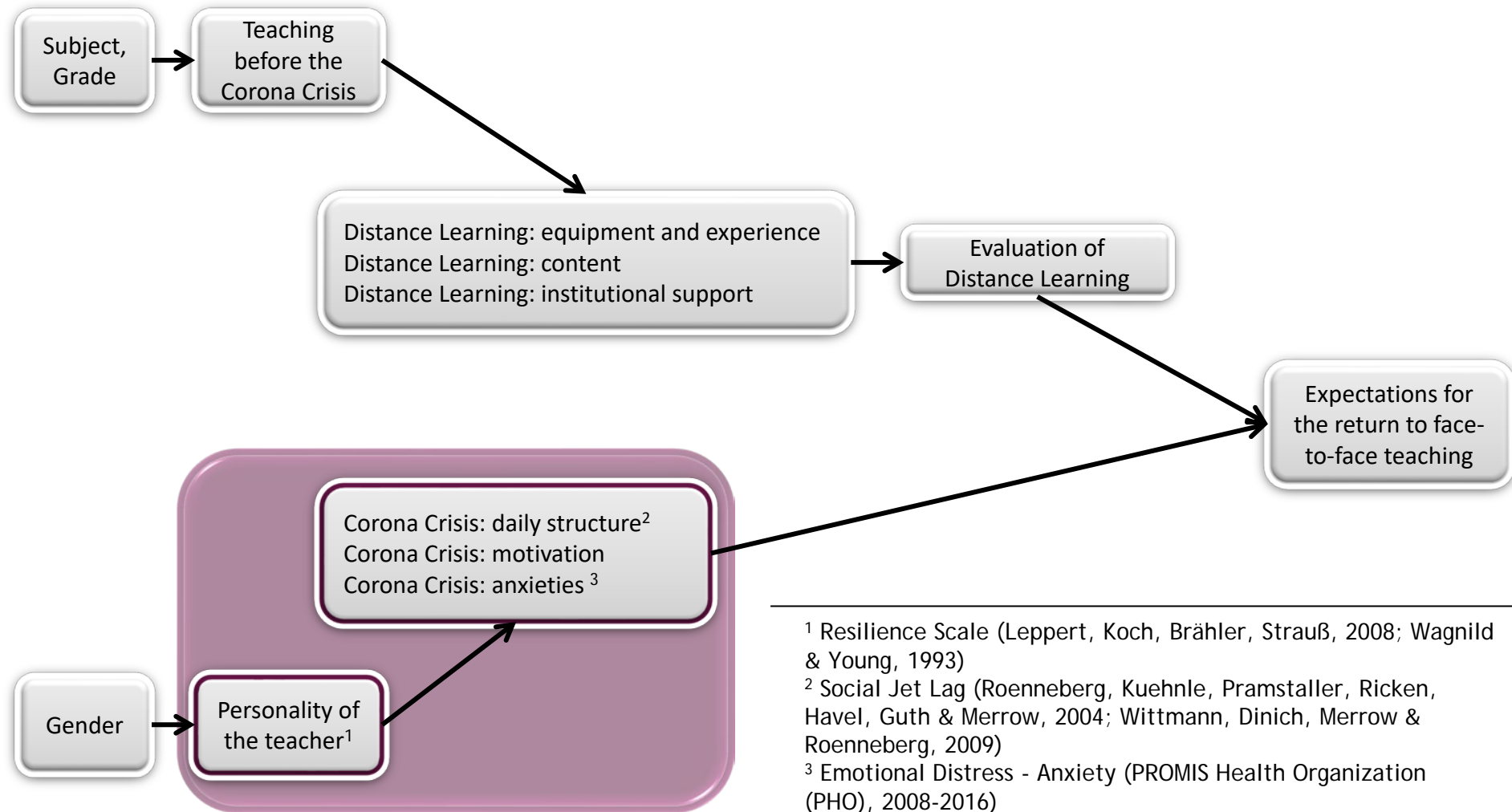
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<sup>1</sup> <https://www.sosicisurvey.de/>

<sup>2</sup> only questionnaires with more than 10 min processing time were evaluated

<sup>3</sup> except state music schools and pre-school education institutions

# Structure of the Questionnaire



<sup>1</sup> Resilience Scale (Leppert, Koch, Brähler, Strauß, 2008; Wagnild & Young, 1993)

<sup>2</sup> Social Jet Lag (Roenneberg, Kuehnle, Pramstaller, Ricken, Havel, Guth & Merrow, 2004; Wittmann, Dinich, Merrow & Roenneberg, 2009)

<sup>3</sup> Emotional Distress - Anxiety (PROMIS Health Organization (PHO), 2008-2016)



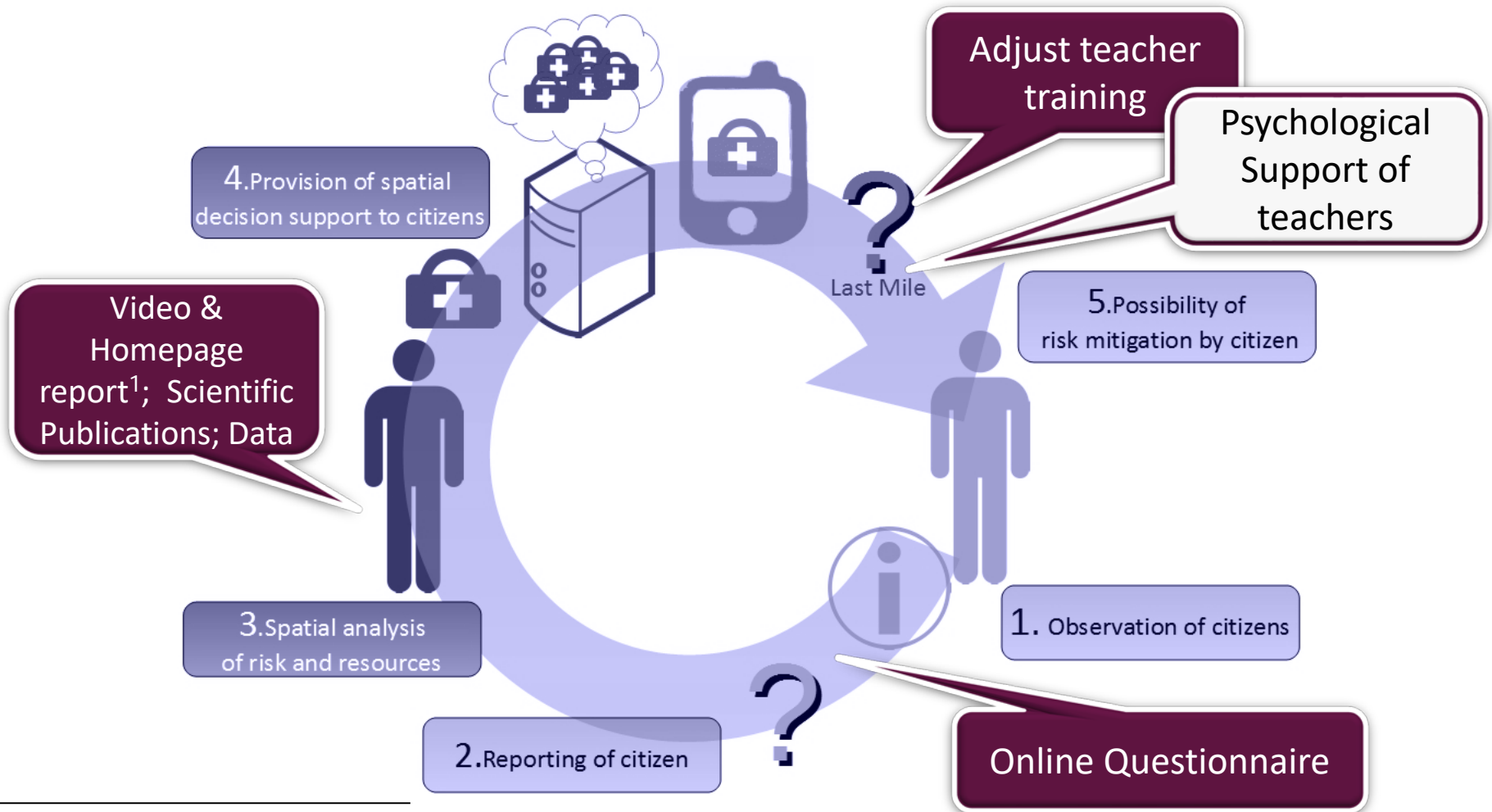
# Findings: Summary

- With **increasing teacher resilience**, the **rejection of distance learning also decreased** significantly among primary school teachers.
- **Female teachers** reported significantly more anxieties in quarantine than male teachers. The anxieties were **negatively related to the teacher's resilience**.
- **Older teachers with more anxiety** in quarantine were unwilling to return to face-to-face teaching.



Mental health issues and anxieties related to the corona crisis have the potential to affect the quality of teaching negatively.

# Communication Cycle: Study



<sup>1</sup> <https://ph-tirol.ac.at/studie-distance-learning>

# COVID-19 and mental health: teacher's role

A teacher is a person at risk, but also a disseminator.

Six important roles for the psychiatrist (Banerjee, 2020):

1. **education** of the public about the common psychological effects of a pandemic,
2. motivating the public to **adopt strategies** for disease prevention and health promotion,
3. integrating their services with available health care,
4. teaching **problem-solving strategies** to cope with the current crisis,
5. empowering patients with COVID-19 and their caregivers, and
6. provision of mental health care to healthcare workers.

# Further development of the Questionnaire

mental health issues  
and anxieties related to  
the corona crisis

Psychological  
consultation resources  
via telemedicine

Generate questionnaire **tailored** to location where and circumstances under which the questionnaire is used. Questionnaire of the Study in Tyrol (Austria) can be used as basis. (Spatial Decision Support)



**Personalization** of questionnaire, enhance with local information, limit questionnaire to available time and highest medical priority. (Adaptive Testing)



Self-assessment framework that can be kept **private** by the user **or shared** in an encrypted way for anamnesis of public health support centers in the respective country.



Development of risk/demand and resource supply maps in GIS (GIS Risk and Resource Maps) using **open** geospatial data (Open Data Kit, Open StreetMap) and **open** source Geographic Information Systems (GRASS GIS, R).

# Questions & Challenges

How does a **functional tailored support** look like?

Proposed therapeutic strategies (a.o. Duan & Zhu, 2020; Liu et al., 2020a; Liu et al., 2020b; Xiao, 2020; Zhou et al., 2020; Yao et al., 2020)

BB

[...] depend crucially on the **availability of trained manpower and infrastructure**, and it is not known to what extent these approaches will be **accepted** by the general public. Moreover, they have not yet been tested or validated in the respective target populations.

- Rajkumar (2020) QQ

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# Thank you very much for your attention!



E-Mail: [eval.homeoffice@ph-tirol.ac.at](mailto:eval.homeoffice@ph-tirol.ac.at) | [melanie.platz@ph-tirol.ac.at](mailto:melanie.platz@ph-tirol.ac.at)



Web: <https://ph-tirol.ac.at/> | <https://ph-tirol.ac.at/studie-distance-learning>

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# APPENDIX

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# RELEVANCE

- SDG 4 aims to ensure **inclusive and equitable quality education** and promote lifelong learning opportunities for all.<sup>1</sup>
- “A fundamental change is needed in the way we think about **education**’s role in global development, because it has a catalytic impact on the **well-being of individuals** and the **future of our planet**.” (Irina Bokova, former Director-General of UNESCO, 2009-2017)<sup>2</sup>

<sup>1</sup> <https://sustainabledevelopment.un.org/sdg4>

<sup>2</sup> [http://www.unesco.org/new/en/media-services/single-view/news/education\\_needs\\_to\\_change\\_fundamentally\\_to\\_meet\\_global\\_devel/](http://www.unesco.org/new/en/media-services/single-view/news/education_needs_to_change_fundamentally_to_meet_global_devel/)

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# GIST-Q AND TAILORED SUPPORT

# Covid 19 and mental health: literature review

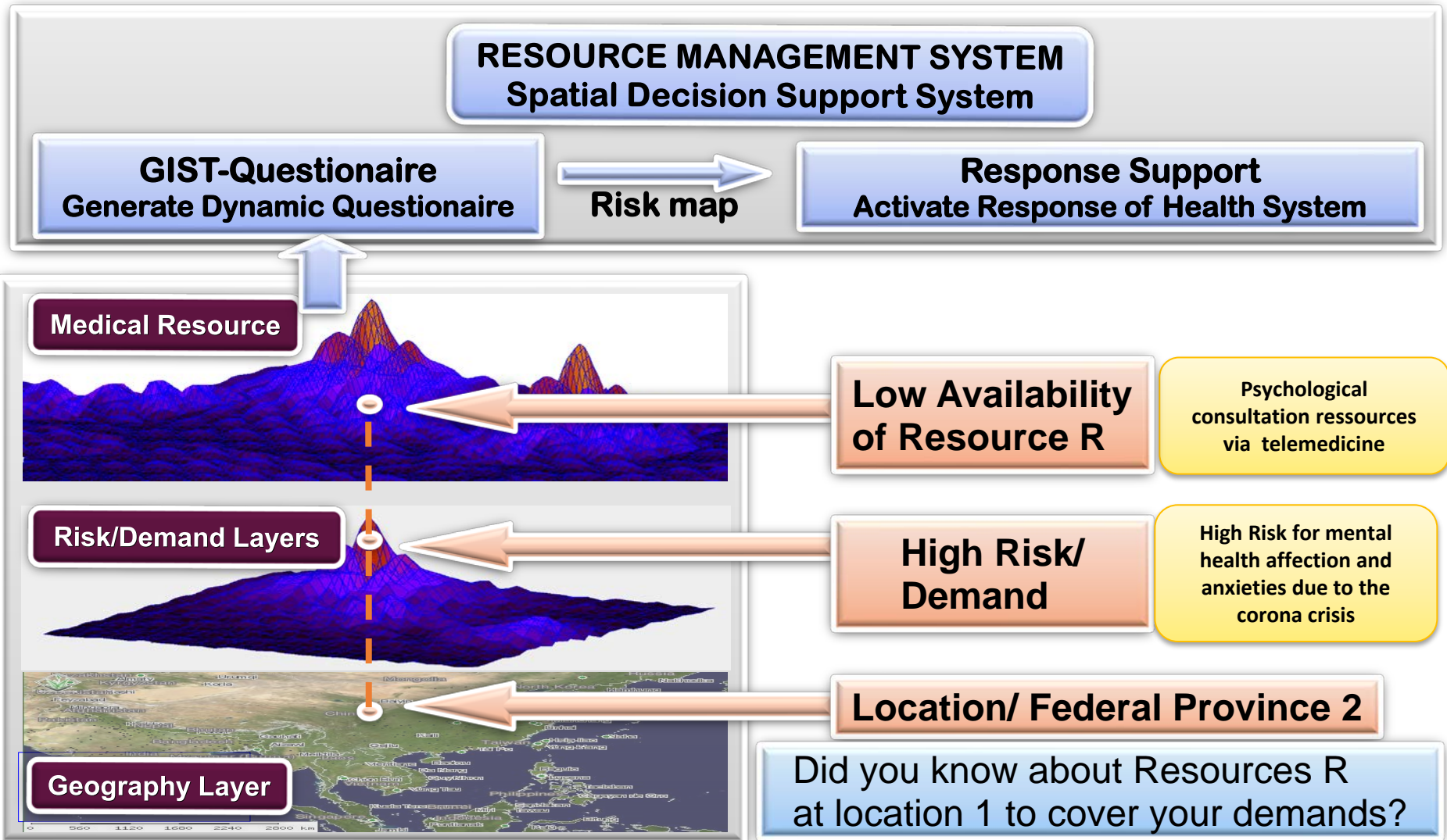
Proposals for more specific therapeutic strategies providing mental health services in an easily accessible manner without any increase in infection risk include:

- development of teams of specialists qualified to address emotional distress (Duan & Zhu, 2020);
- the training of community health personnel in basic aspects of mental health care (Duan & Zhu, 2020);
- the use of **online surveys** to assess the scope of mental health problems (Liu et al., 2020b);
- the development of online materials for **mental health education** (Liu et al., 2020a);
- the provision of online counselling and **self-help services** (Liu et al., 2020b);
- the use of structured letters as a form of **asynchronous telepsychiatry consultation** (Xiao, 2020);
- the development of **synchronous telemedicine services** for diagnostic purposes as well as counselling (Zhou et al., 2020);
- and the need to make online mental health services **accessible** to individuals from lower socioeconomic strata (Yao et al., 2020).

# Tailored Response: Regional Differences



# GIST-Q & tailored Response



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related to the mental state and anxieties of teachers

# **SELECTED FINDINGS**



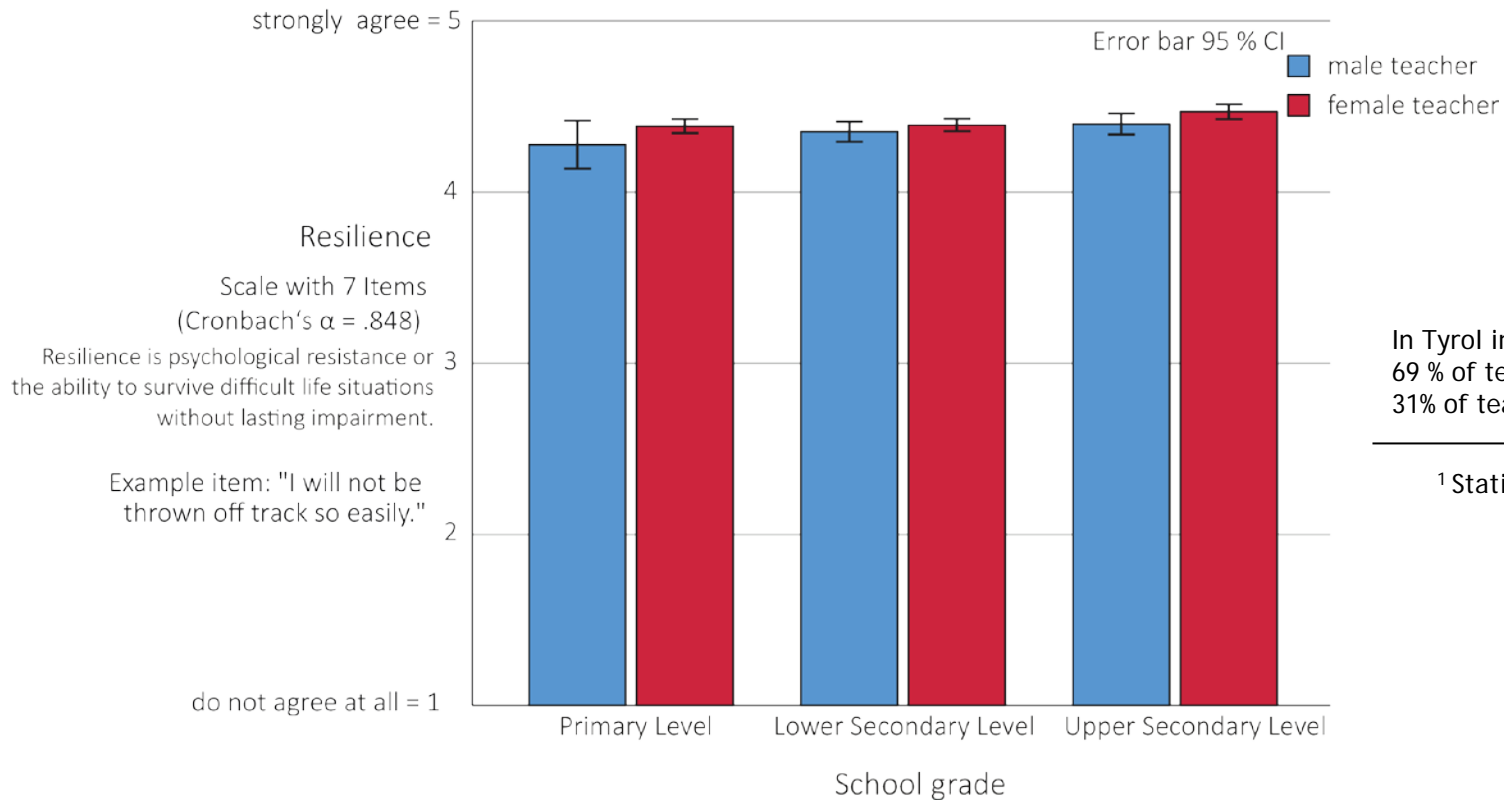
# Objectives/ Research Questions

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- What **attitudes** do teachers have towards distance learning and teaching after lockdown?
- How is the **mental state** of the teachers and what anxieties do they have due to Covid 19?
- Does the mental state of teachers **influence** the attitudes towards teaching during and after the crisis?

A teacher is a person at risk, but also a disseminator.

# Findings

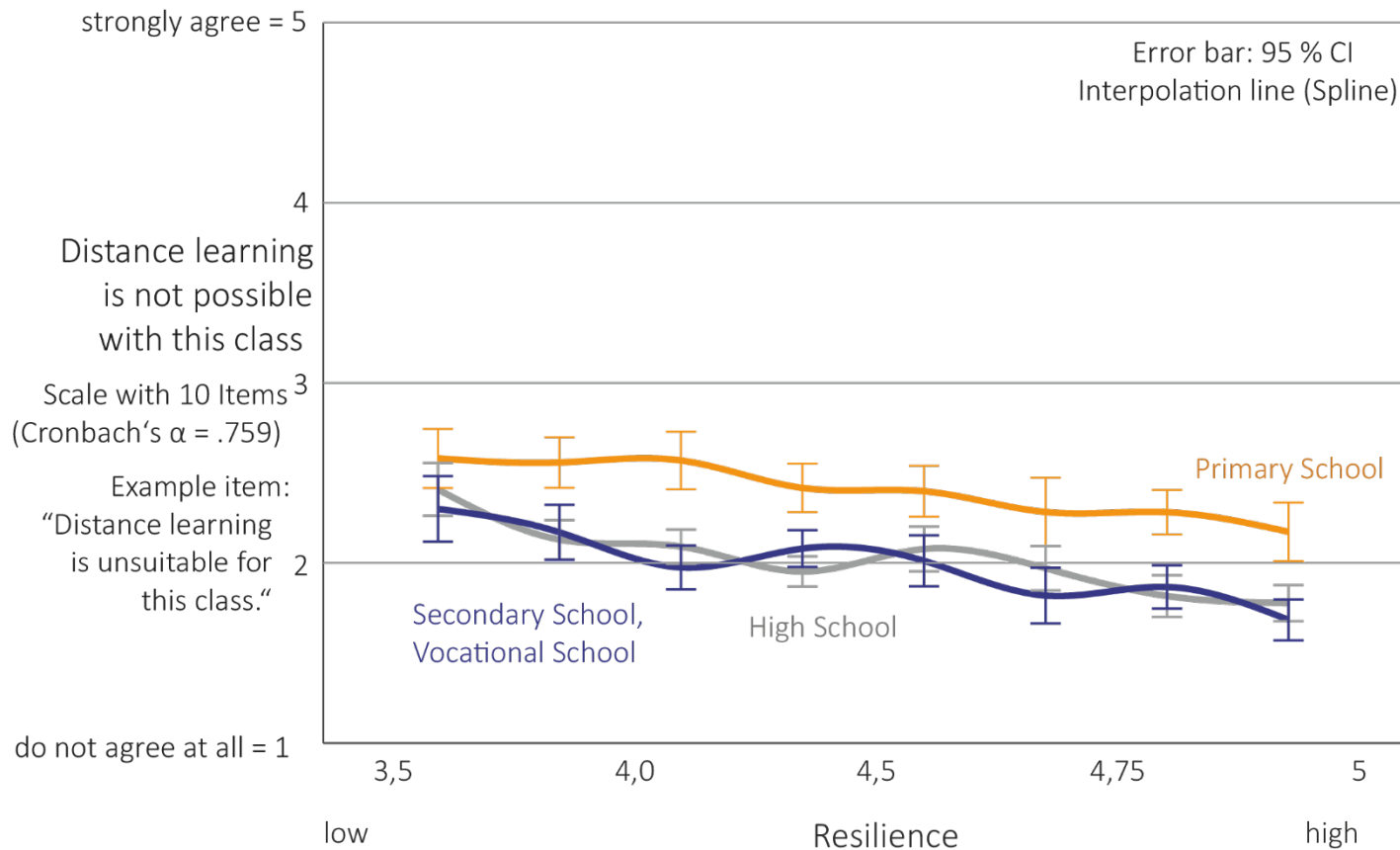


In Tyrol in the school year 2018/19  
69 % of teachers were female and  
31% of teachers were male<sup>1</sup>

<sup>1</sup> Statistik Austria (2020), p. 333

There is a **high degree of resilience** among the teachers.  
Female teachers are significantly more psychologically resilient than male teachers.

# Findings

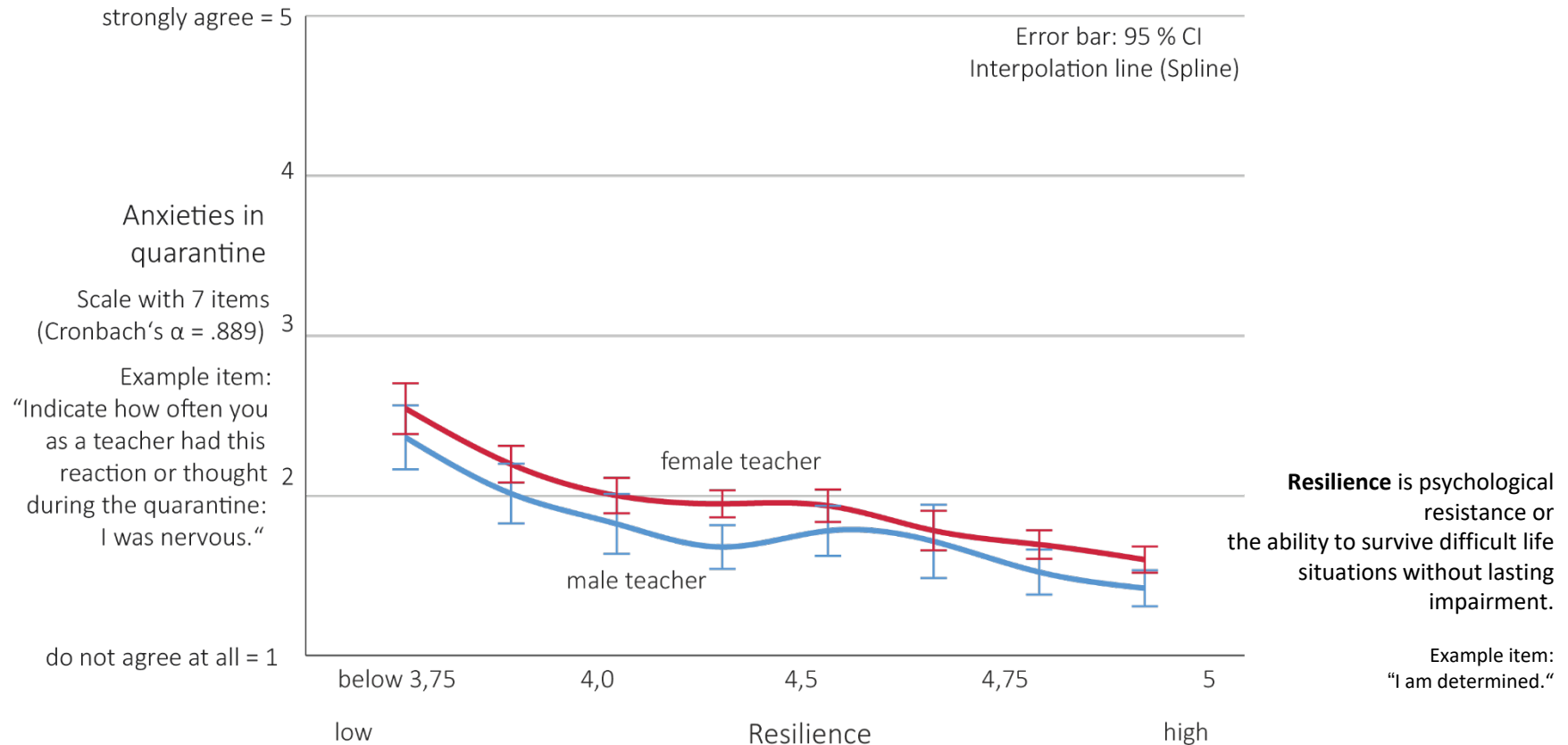


**Resilience** is psychological resistance or the ability to survive difficult life situations without lasting impairment.

Example item: "When I'm in a difficult situation, I can usually find my way out of it."

Distance learning was less suitable for primary school than for other types of schools. With increasing teacher resilience, the rejection of distance learning also decreased significantly among primary school teachers.

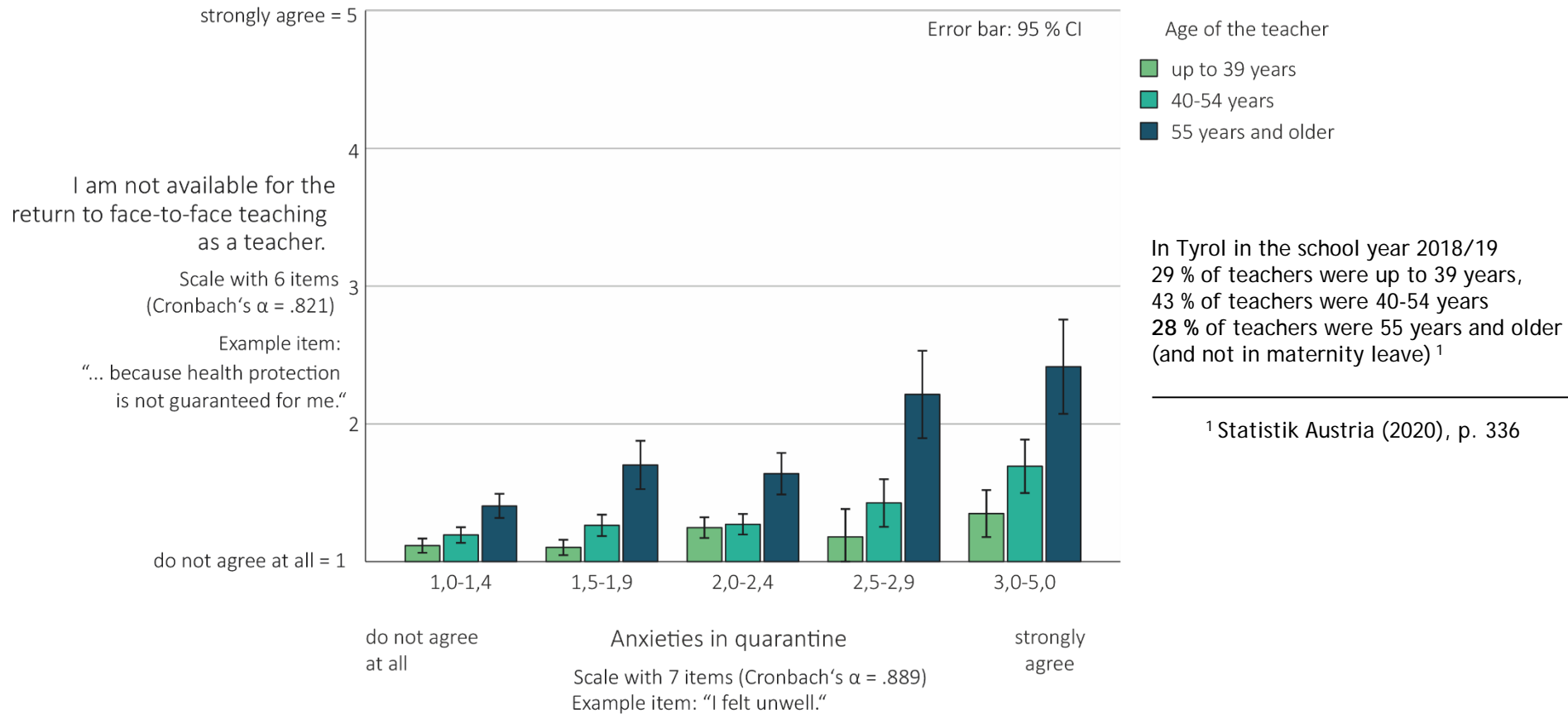
# Findings



**Female teachers reported significantly more anxieties in quarantine than male teachers.**

**The anxieties were negatively related to the teacher's resilience.**

# Findings



**Older teachers with more anxiety in quarantine were unwilling to return to face-to-face teaching.**