

Virtual work arrangements and the psychological safety of minority groups: A pathway to equality?

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Psychological safety

“A shared belief held by members of a team that the team is safe for interpersonal risk-taking”
(Edmondson, 1999, p. 354)

- Potential negative consequences of **mistakes** or **proactive behavior** are minimized
- Allows team to **focus on tasks rather than interpersonal issues**, improving team performance



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Yet, many factors remain unclear...

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Research questions

RQ1: What is the relationship between virtual work arrangements (hybrid and remote) and perceived psychological safety?

RQ2: What is the relationship between minority group status and perceived psychological safety?

RQ3: How does hybrid and remote work moderate the relationship between minority group status and perceived psychological safety?

Hypothesis development (1/3)

Virtual work arrangements

- Communication through digital tools that do not allow for the same **social and emotional cues** in body language as face-to-face communication (Edmondson & Daley, 2020)
- Trust and quality of relationships: More **formal communication** (Pérez-Mateo & Guitert, 2012), **misunderstandings** within the team (Usher & Barak, 2020), and **impeded social interaction** (Janssen & Kirschner, 2020).

*H1_rem and hyb: **Remote work** and **Hybrid work** have negative effects on perceptions of psychological safety.*



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Hypothesis development (2/3)

Minority groups

- **Psychological safety** relates to the ability to voice new ideas, collaborate with other members of the organization, and experiment with new methods.
- **Status** (i.e. level of respect and influence associated with an individual as a result of characteristics such as age, gender, organizational position, ethnicity (Anderson et al., 2001)) can affect this behavior.
- The **higher the status** of the employee, the **safer the individual may feel to speak up** and share ideas, and vice versa (Bienefeld & Grote, 2014).

H2: Minority status has a negative effect on perceptions of psychological safety.



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Hypothesis development (3/3)

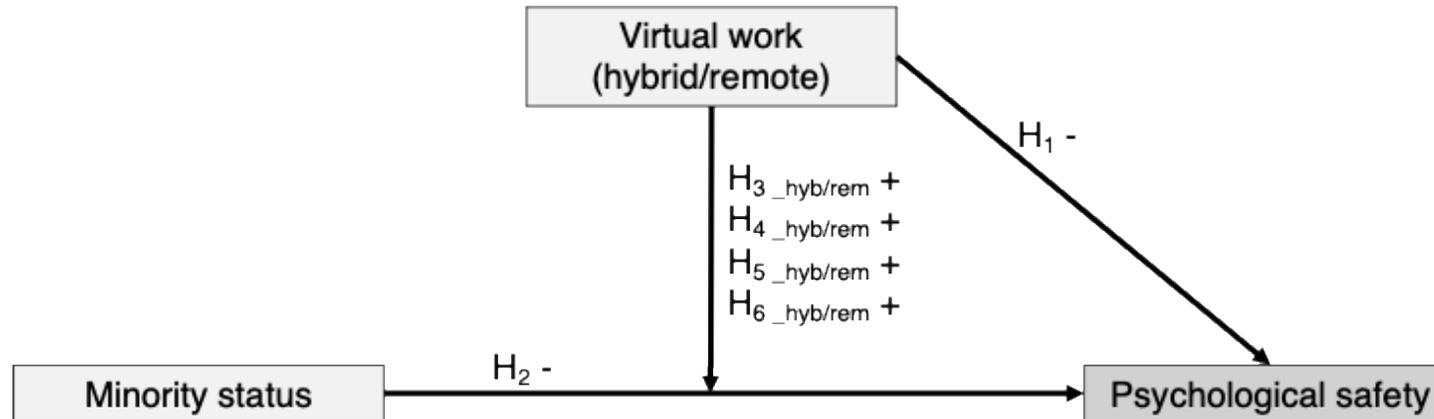
- **Additive** and **reductive properties** of digital technologies (Carte & Chidambaram, 2004)
- **Equalization effect** – through dampening dynamic and static cues (Dubrovsky, Kiesler, & Sethna, 1991)

H3_rem and hyb H6_rem and hyb:

*Remote work and hybrid work will positively moderate the relationship between **race, physical disabilities, sensory disabilities, mental disabilities, language, gender and psychological safety.***



Conceptual model



Methodology: Field survey

- **Data:** Survey data from employees at a university in Finland (n = 986)
- **Demographics:** 40% work in service roles, and 60% in teaching and research. 46.2% report working on-site, 38.2% in a hybrid arrangement, 15.6% remotely. 80.7% are Caucasian, 26.7% have a disability, 66.6% have Finnish as their mother tongue, and 47.2%, of participants are male.
- **Measures**
 - Work arrangement:** 'how do you mainly work?' (remotely, on-site, remotely and on-site equally, remote work not possible).
 - Race:** 'Caucasian', 'Asian/Asian Pacific', 'Black/Caribbean/ Afro-Caribbean', 'Hispanic/Latino', 'Mixed', and 'Other'.
 - Disability:** 1) Physical, 2) Mental, 3) Sensory, and 4) Intellectual
 - Language:** 'what is your level of Finnish proficiency?'; CERF
 - Gender:** 'what gender do you identify with?' ('Male', 'Female', 'Non-binary', 'Other', and 'Prefer not to disclose')
 - Psychological safety:** Seven-item Team Psychological Safety Scale developed by Edmondson (1999).

Models and findings

Model 1

Impact of remote and hybrid work arrangements on psychological safety across sample (H1)

$$PS_i = \beta_0 + \beta_1 WTH_i + \beta_2 WTR_i + \gamma_1 Age_i + \gamma_2 Tenure_i + \gamma_3 Personnel + \varepsilon_i$$

Hybrid work -> no significant effect on PS

Remote work -> significant (10%) **negative** effect on PS

| | Model (1) |
|--|-----------------------|
| Hybrid work | -0.1538 (0.172) |
| Remote work | -0.3929* (0.223) |
| Age | -0.0261*** (0.009) |
| Tenure | 0.0246** (0.012) |
| Personnel | -0.7122*** (0.166) |
| Intercept | 7.2706*** (0.338) |
| F-statistics | 5.148*** |
| Number of observations: N = 986 | |
| Sig ≤ 0.01 ***, Sig ≤ 0.05 **, Sig ≤ 0.1 * | |

Models and findings

Model 2

Impact of minority group status on
psychological safety(H2)

$$PS_i = \beta_0 + \beta_1 \text{Minority}_i + \gamma_1 \text{Age}_i + \gamma_2 \text{Tenure}_i + \gamma_3 \text{Personnel} + \varepsilon_i$$

Negative significant (10%) effect on PS

- Non-Caucasian ethnicity
- Mental disability
- Non-native Finnish proficiency
- Female gender

No significant effect on PS

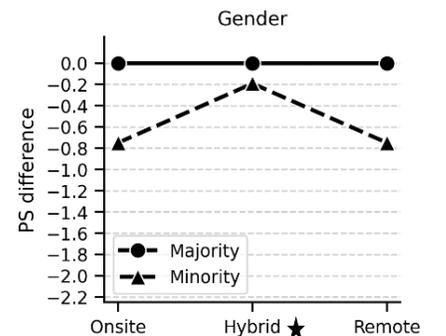
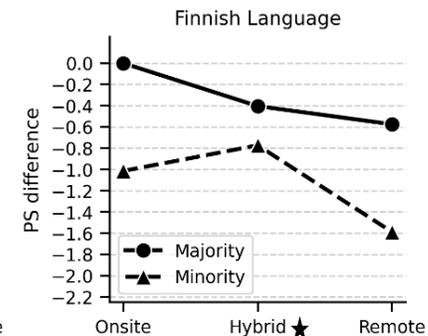
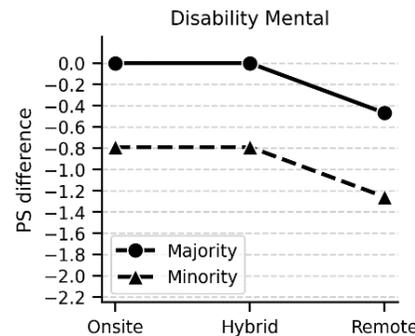
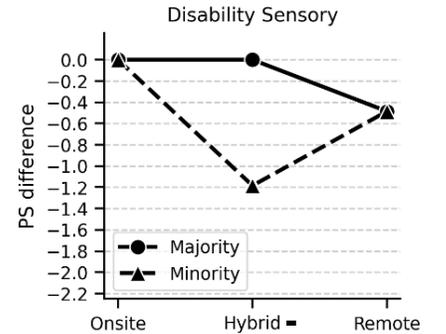
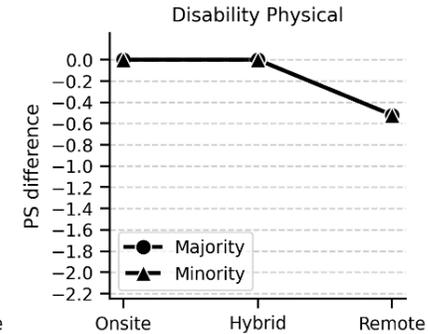
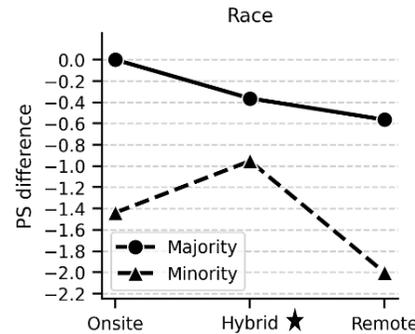
- Physical disability
- Sensory disability

Models and findings

Model 3

How virtual work arrangements moderates the relationship between minority status and PS (H3-H6)

$$\begin{aligned}
 PS_i = & \beta_0 + \beta_1 WTH_i + \beta_2 WTR_i + \\
 & \beta_3 Minority_i + \beta_4 WTH_i \times Minority_i + \\
 & \beta_5 WTR_i \times Minority_i + \\
 & \gamma_1 Age_i + \gamma_2 Tenure_i + \gamma_3 Personnel + \varepsilon_i
 \end{aligned}$$



Conclusion and contributions

Our study

1. Furthers our understanding of virtual ways of working and minority status as antecedents of psychological safety.
 2. Theorizes and empirically studies how virtual ways of working may dilute status differentials between minority and majority group members, resulting in an equalization effect in terms of perceived psychological safety.
 3. Adds insight into how different work arrangements can be used to create a psychologically safe work environment.
- Overall, we link the equalizing effect of technology not only to psychological safety, but also to DEI outcomes.
- We encourage organizations to avoid a one-size-fits-all approach and rather focus on understanding the unique needs of their employees.

Thank you! Questions?



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