

# Ethnic and social inequalities in access to health care: Evidence from a nation- wide field experiment in Germany

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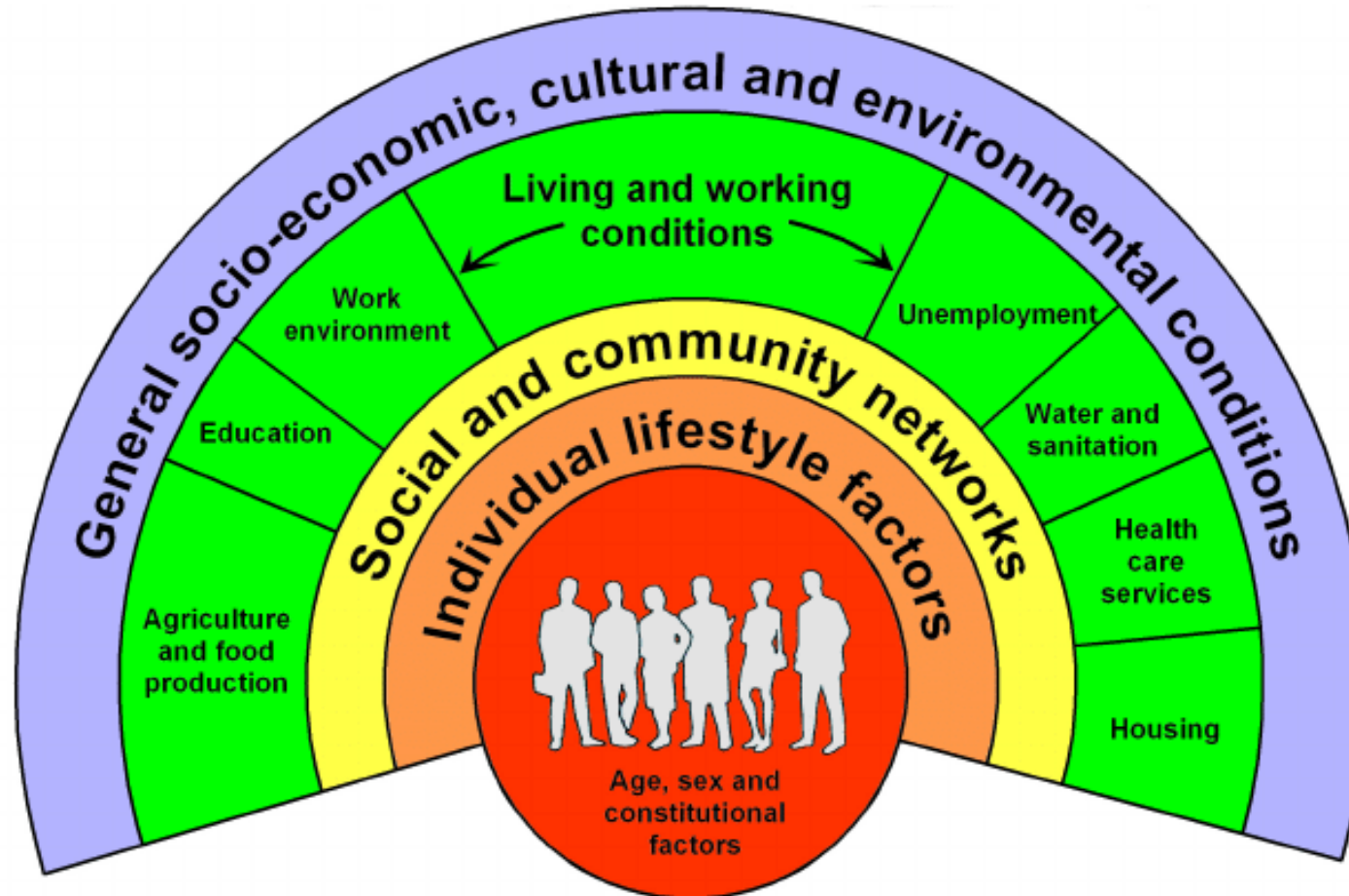
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# Structure

1. Background
2. State of Research
3. Research Questions
4. Research Design
5. Preliminary Results
6. Discussions

# Social inequality in health is universal, persistent, and well-evidenced (WHO 2005)



Source: Dahlgren and Whitehead, 1991

# Background

- A person's social, economic and psychological circumstances influence her/his health throughout life course: stress, health behavior (**nutrition, physical exercise and drug/alcohol abuse**), exposure to environmental toxins, and access to health services and care (WHO 2005).
- Health inequality manifests itself in diverse dimensions: socioeconomic status (education, occupation, income), race and ethnicity, gender, and sexual orientations.

# Background

- **What we already know**

**Persons with a lower socioeconomic status (SES), with a minority racial/ethnic background, migrants, and sexual minorities have a lower health status than the main stream populations.**

**The former bears a higher disease burden (infectious and noncommunicable chronic illnesses) and/or higher premature mortality** (WHO 2004; RKI 2008 ; Mayer et al. 2008; Santos-Hövenner et al. 2019; Starke et al. 2021).

# Background

- **What is less Known**
- **Social inequality in access to preventative and curative health care: e.g., discrimination against disadvantaged groups (low SES, racial/ethnic or sexual minorities).**
- **Unequal access to health care due to discrimination: potentially a driver of social and ethnic inequalities in health.**

# Background

- **Lower SES, as implicated in lack of health insurance or having public vs private health insurance, plays an important role in access to necessary and timely health care and treatment.**
- **Patients with no health insurance or with public health insurance are discriminated against in accessing preventative and curative care (LaVeist et al. 2003; Han et al., 2015; Lungen et al. 2008; Kuchinke et al. 2009).**

# State of Research

- **Quite a number of previous studies using surveys found:**
- **Self-reported discrimination, racism, and „othering“ in health sector, (Beigang et al. 2017; Antidiskriminierungsstelle des Bundes 2018; Afrozensus 2022; Nadira 2022)**
- **Negative effects of perceived discrimination on mental and physical health (Pascoe & Richman 2009)**



# State of Research

- **More extensive experimental research in the US and UK.**
- **Show race/ethnicity or health insurance-based discrimination in access to health care** (La Veist et al. 2003; Lee et al. 2009; Han et al., 2015; Kugelmass 2016; Leech et al. 2019).
- **Limited experimental studies in Germany:**
- **Privately insured patients more likely to be offered an appointment, and have a shorter waiting time, than patients with statutory health insurance** (Werbeck et al. 2021; Sauerland et al. 2009; Lungen et al., 2008).

# Explanations of discrimination

**Ethnic/racial stereotypes:** Patients from certain racial and ethnic backgrounds are generally perceived as „**difficult**“ by health care professionals ([Drewniak et al. 2016](#)).

„**Statistical discrimination**“: differences in treatment rates arise from relatively poor communication between a minority patient and a health care provider. This can lead to mismatched or less treatments ([Balsa & McGuire 2001](#)).

**Language-based discrimination:** e.g., Nurses and physicians lack communication training and prefer native speakers with no accents ([Leech et al. 2019](#)).

# Explanations of discrimination

- **Health Insurance-based discrimination** driven by financial incentives ([Han et al. 2015](#); [Gottschalk et al. 2018](#)).
- **„Taste-based“ discrimination**: e.g., psychotherapists prefer “YAVIS” attributes: young, attractive, verbal, intelligent and successful and “psychologically minded” patients ([Tryon 1986](#); [Teasdale & Hill 2006](#)).

# State of Research

- **While illuminating, previous studies have several limitations.**
- **Reporting biases in self-reports: they do not necessarily reflect discriminatory treatment by medical and health professionals.**
- **Experiments still rare in Germany: small in the geographical scope, few doctors' specializations, and limited aspects of discrimination: e.g., only focusing on health insurance based discrimination.**

# What is new about our project?

- Our project aims to bridge existing knowledge gaps by:
- Conducting a **large** field experiment in **whole** Germany
- Include doctors' clinics in **five** medical specializations
- Examine **multiple** patient attributes and their **interactions**

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# Research Questions

# Main Research Questions

1. Are patients with foreign-sounding names discriminated against when accessing health care?
2. Are patients with private health insurance or with a doctoral degree advantaged in accessing health care?
3. Does the level of discrimination vary by doctors' specializations?
4. Are there interactions among three attributes for discrimination: foreign-sounding names, public health insurance and having no a doctorate?  
**For example, would discrimination based on ethnicity (foreign-sounding names) decrease, if the patient has private health insurance or a doctorate?**

## Main Research Questions

- **We address these questions by looking at patients' experience with the initial gatekeeping at a doctor's clinic:**
- **e.g., patients contact the doctor to request an appointment.**
- **Primary care access in Germany:**
- **a) primary care mostly provided by a private medical practitioner;**
- **b) no referral required for most specialists, except for radiology and others (e.g., oncology for follow-up check ups).**



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# Research Design

# Research design

- Preregistered **field experiment** and doctors survey (N:11.221)
- Between-design
- **Wave 1** (no GPs): June – July 2022 (N: 2.698)
- **Wave 2**: January 2023 (N: 6.280)
- Via e-mail and phone messages (only 1st wave, low N)
- General practitioners (50 %), pediatricians (12 %), radiologists (4 %), dermatologists (19 %), psychotherapists (15 %)

# Treatments

- **Ethnic background:** German, Nigerian, and Turkish names
- **Gender:** Male and female
- **Urgency:** Acute versus routine check-up
- **Health insurance:** Statutory versus private
- **(High) social status:** Dr. title versus no title

## Doctors revenues (Statistisches Bundesamt 2019)

Specialist	Net revenue	Revenue gained from SHI patients
General practitioners	252.000 €	87%
Pediatricians	239.000 €	84%
Radiologists	1.128.000 €	33%
Dermatologists	342.000 €	55%
Psychotherapists	238.000 €	87%

# E-Mail Sample

Von: elif1yilmaz@t-online.de

An: [redacted]

Verschickt: 12.07.2022 15:51:16 Mitteleuropäische Zeit

Betreff: Termin vereinbaren

E-Mail

Sehr geehrte Damen und Herren,

Gender

Ich möchte gerne einen Termin als Patientin in Ihrer Praxis ausmachen.

Ich habe viele Muttermale und würde die gerne mal wieder untersuchen lassen.

Routine Check-up

Ich bin bei der Allianz versichert.

Ich bin zeitlich flexibel und würde mich über einen Vorschlag für einen baldigen Termin freuen. Ich werde diesen dann zeitnah bestätigen.

Insurance

Vielen Dank für Ihre Mühe.

Mit freundlichen Grüßen

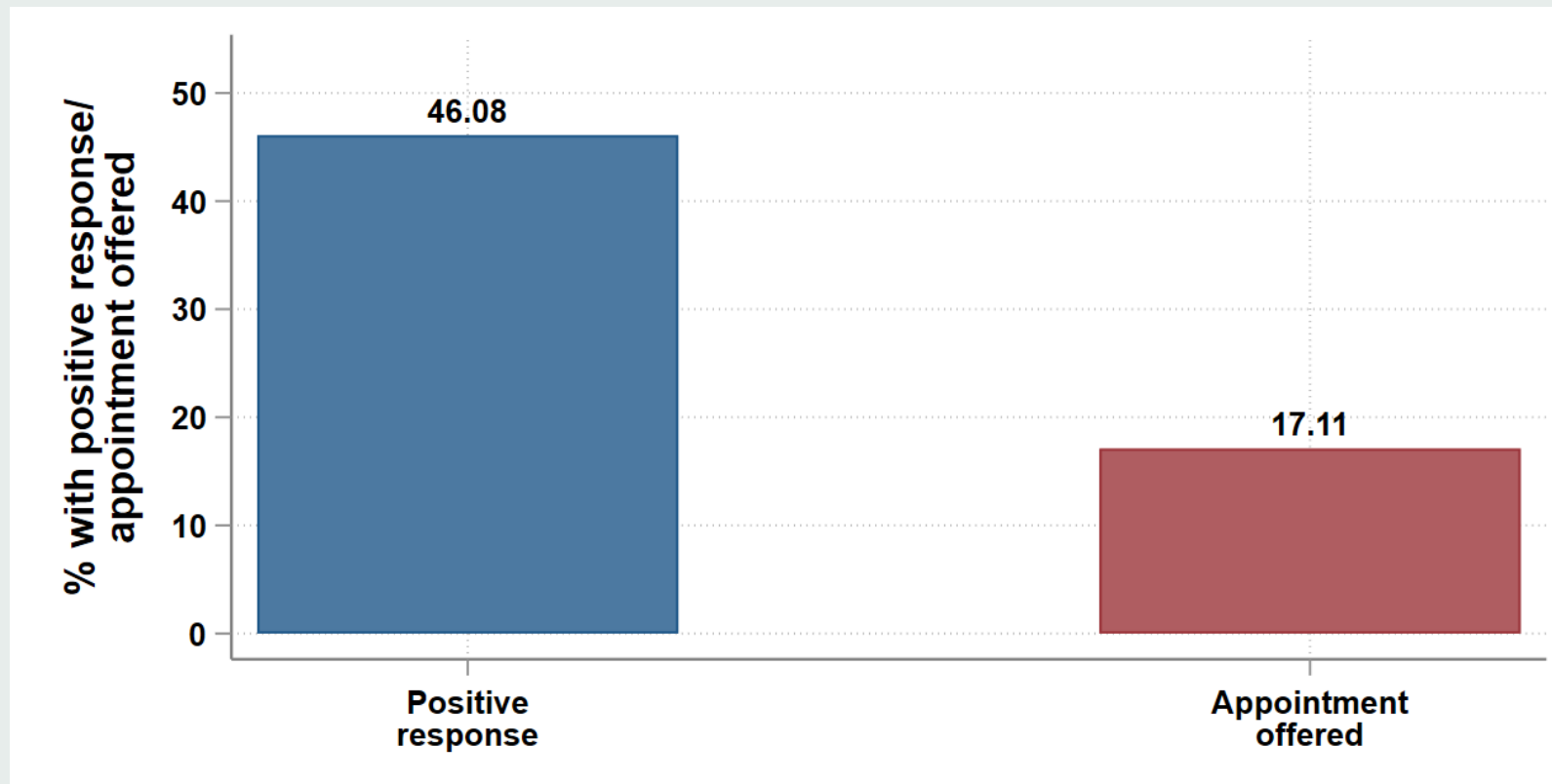
Elif Yilmaz

Ethnic background +  
(high) social status

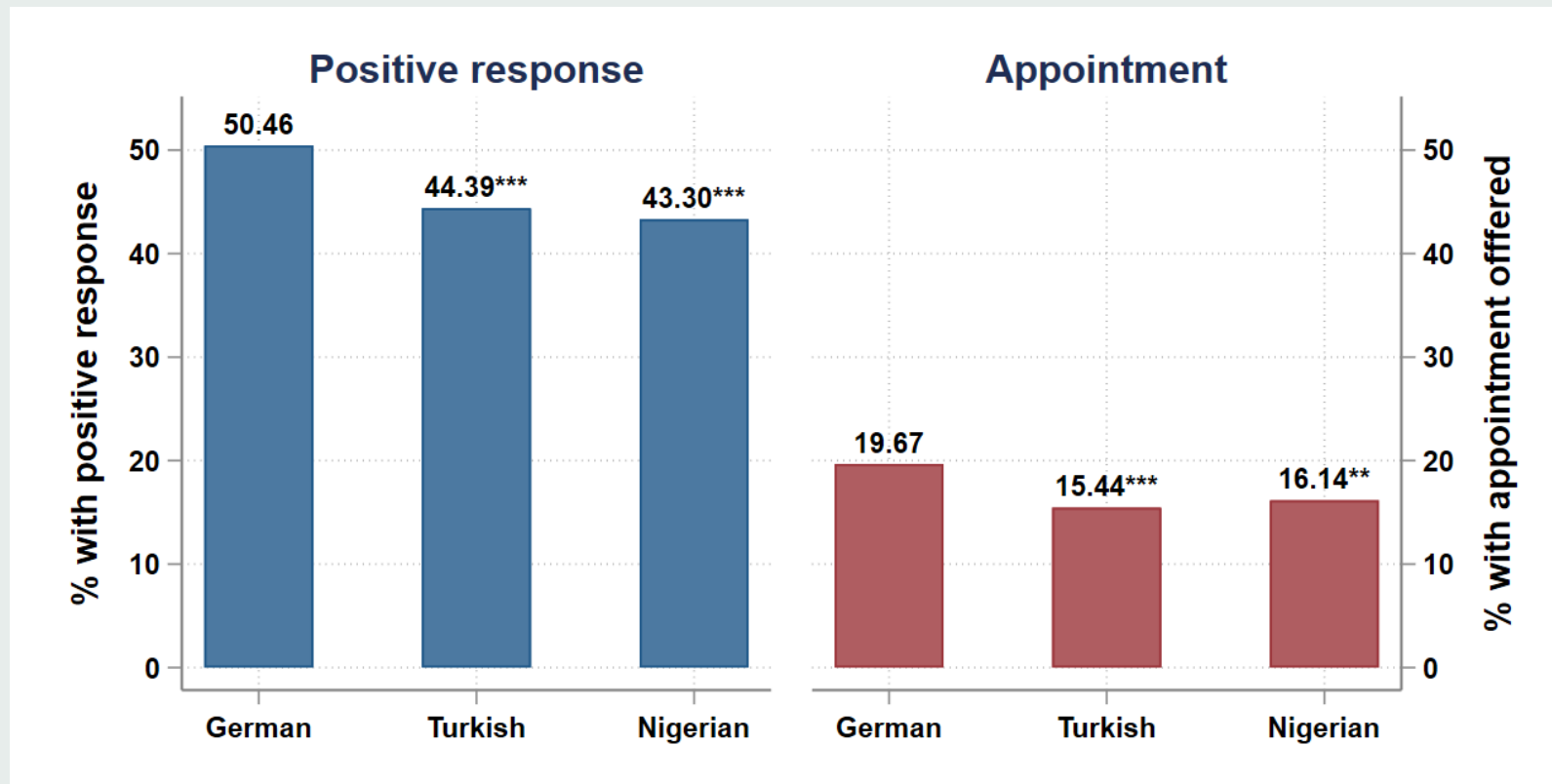


# Results

**46% receive a positive response**  
**17% are offered an appointment**



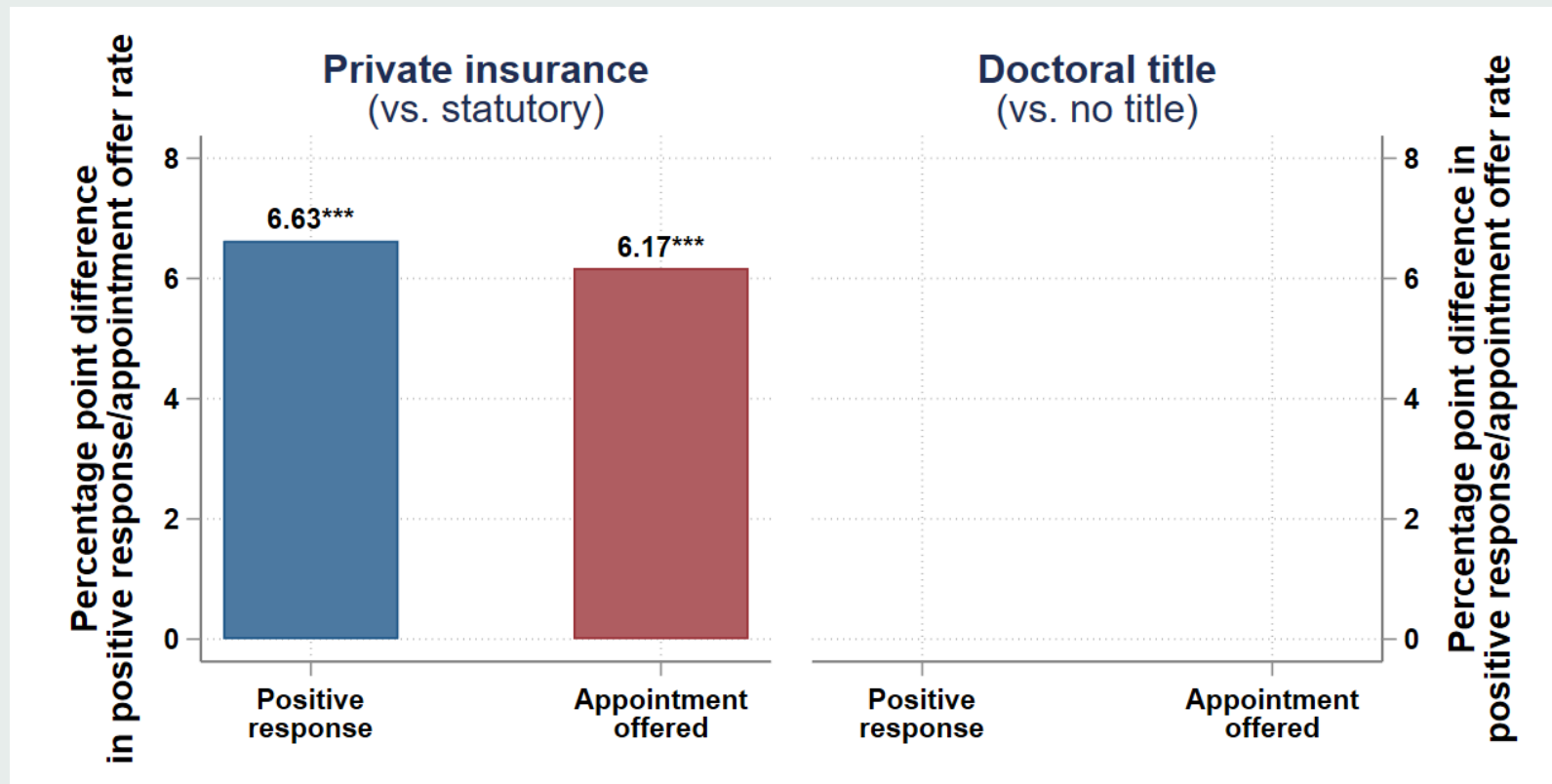
# Patients with foreign-sounding names less likely to receive positive response or appointment offer



N = 6,792. Bars show positive response/appointment offer rate for each group. Symbols indicate two-tailed p-values for difference to patients with German sounding names: + p < .1; \* p < .05; \*\* p < .01, \*\*\* p < .001.

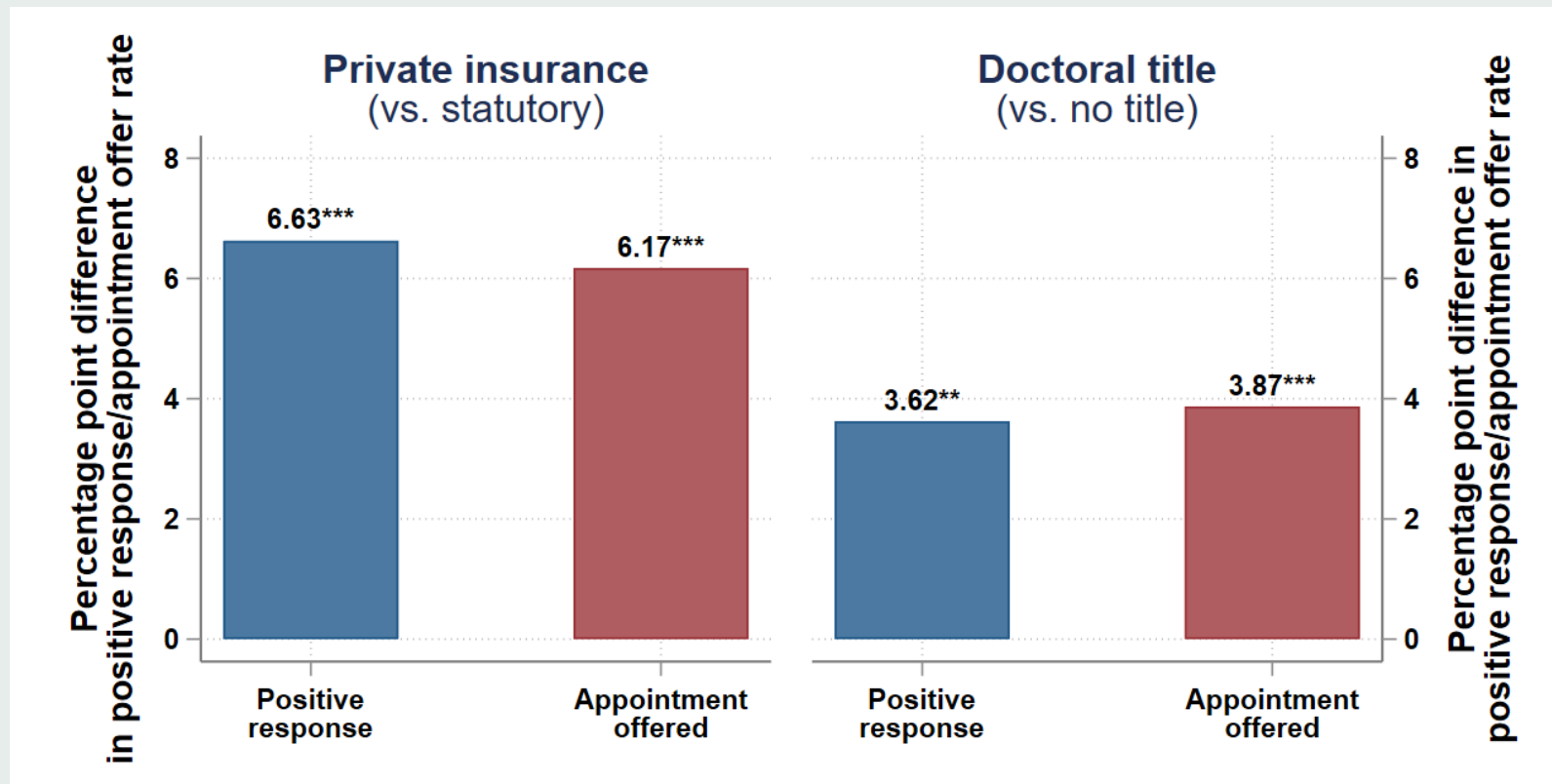


# Patients with private insurance treated more favorably...



N = 6,792. Bars show difference in response/appointment offer rate vs. comparison group. Symbols indicate two-tailed p-values for difference: + p < .1; \* p < .05; \*\* p < .01, \*\*\* p < .001.

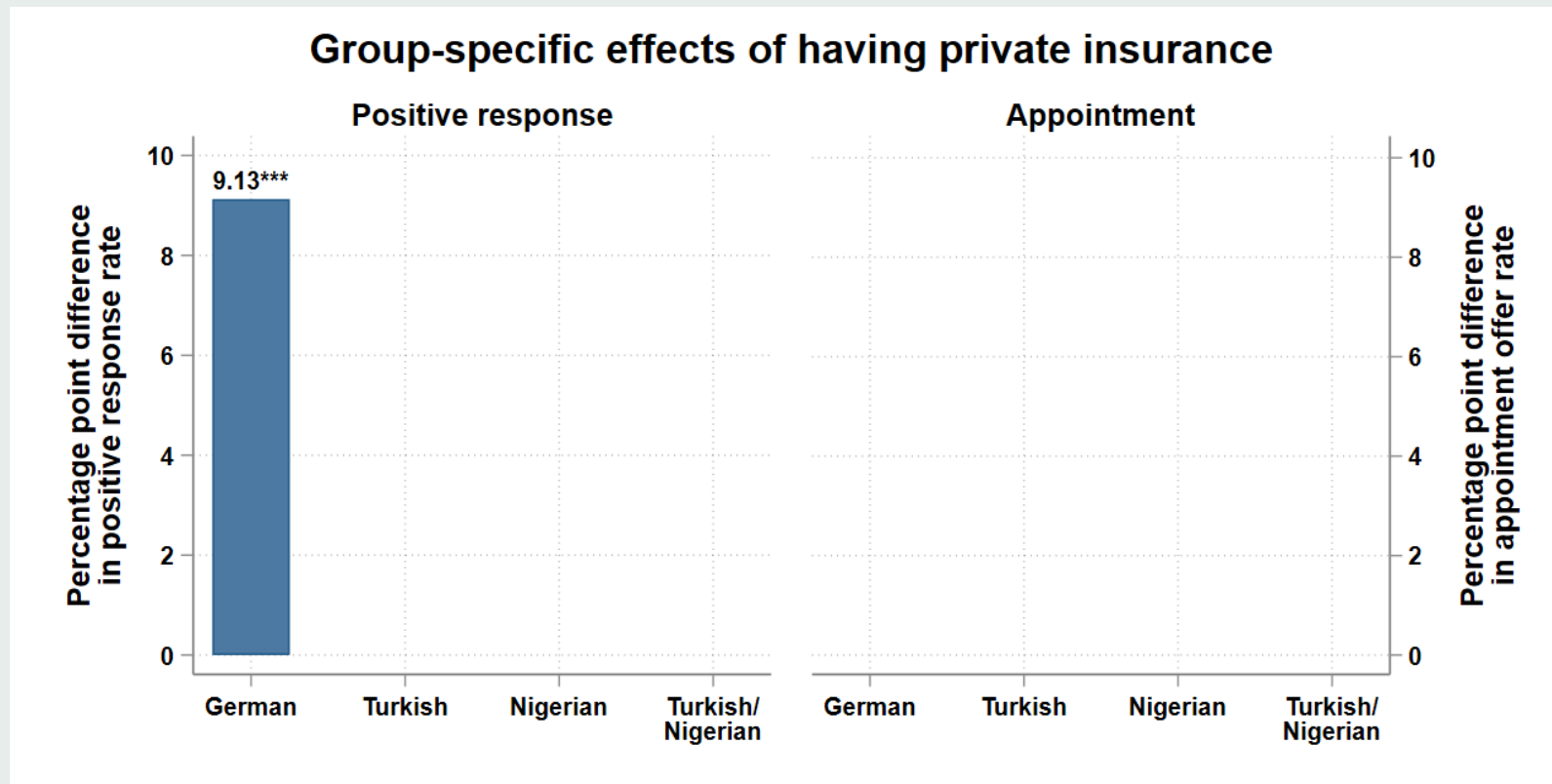
# Patients with private insurance treated more favorably... ...as are those with a doctoral degree



N = 6,792. Bars show difference in response/appointment offer rate vs. comparison group. Symbols indicate two-tailed p-values for difference: + p < .1; \* p < .05; \*\* p < .01, \*\*\* p < .001.

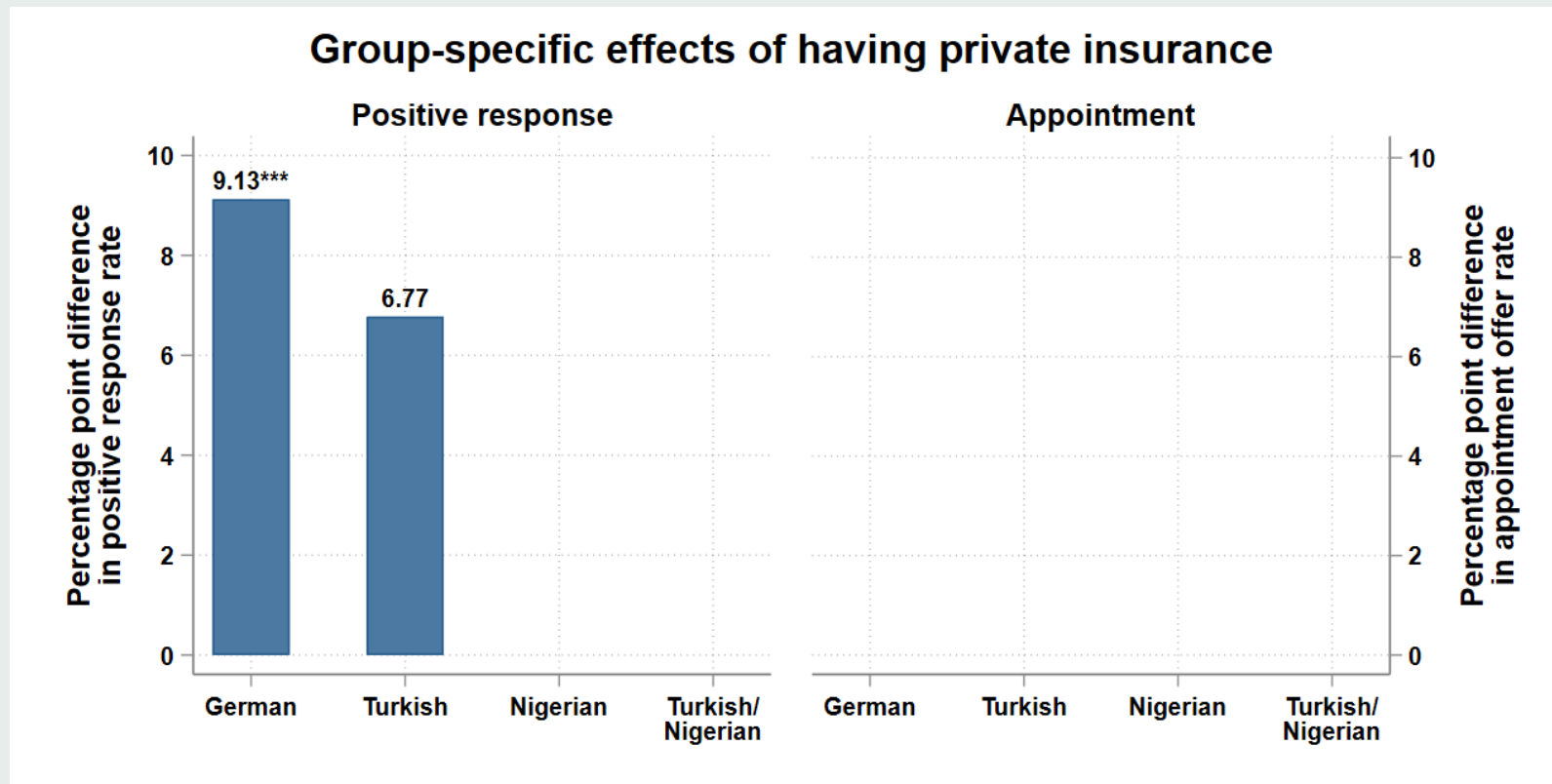
- **Who benefits more from signalling private insurance or a doctoral degree?**
- **Do these markers help to overcome ethnic discrimination?**
- **Is there an interaction between ethnicity and private insurance/doctoral title?**

# Marked benefits of PHI for German patients...



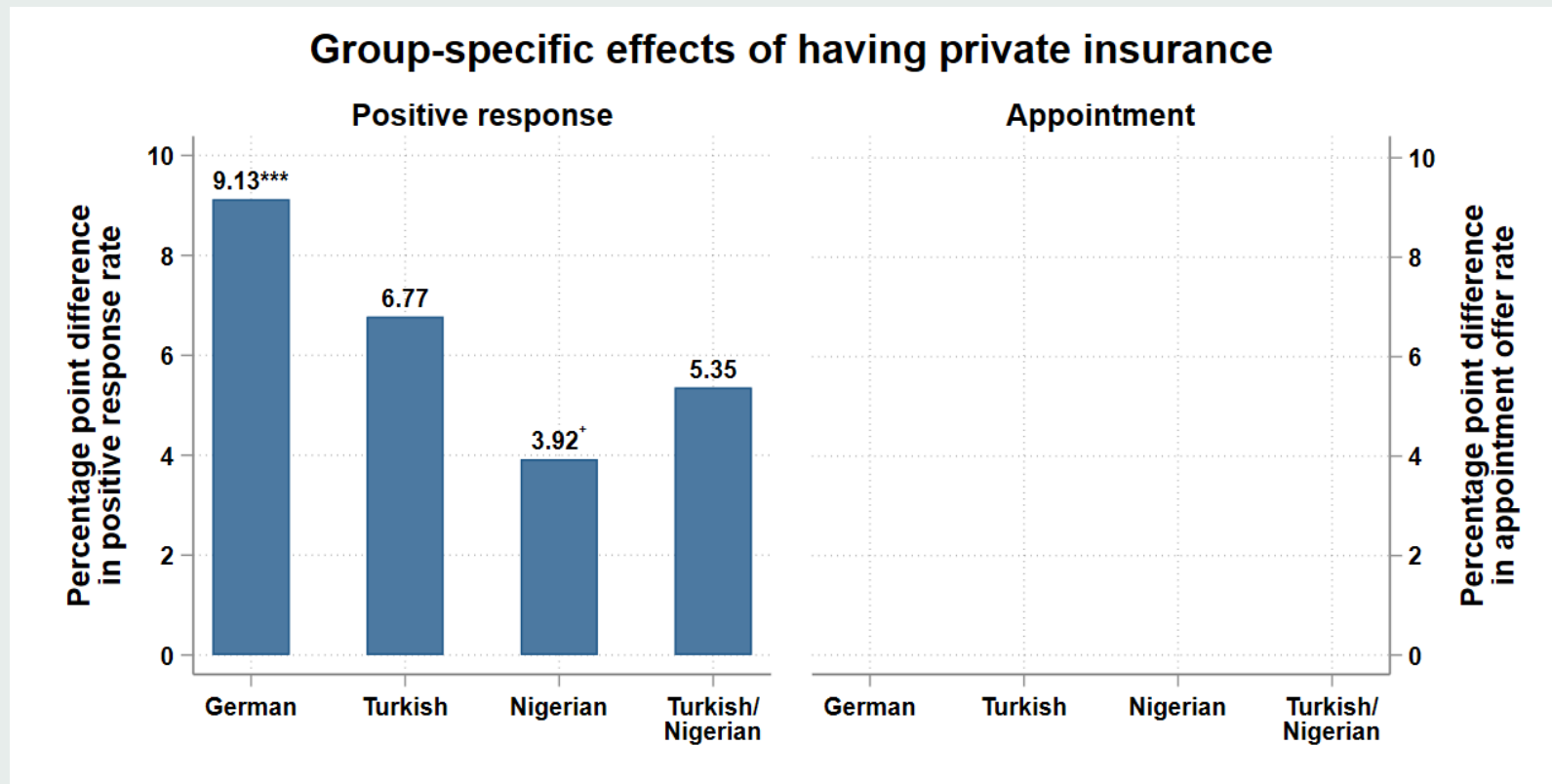
N = 6,792. Bars show group-specific effects of private (vs. statutory) insurance status. Symbols indicate two-tailed p-values for group-specific effect (German names) and difference to effect for Germans (non-German names): + p < .1; \* p < .05; \*\* p < .01, \*\*\* p < .001.

# Marked benefits of PHI for German patients... ...weaker effects for patients with foreign-sounding names



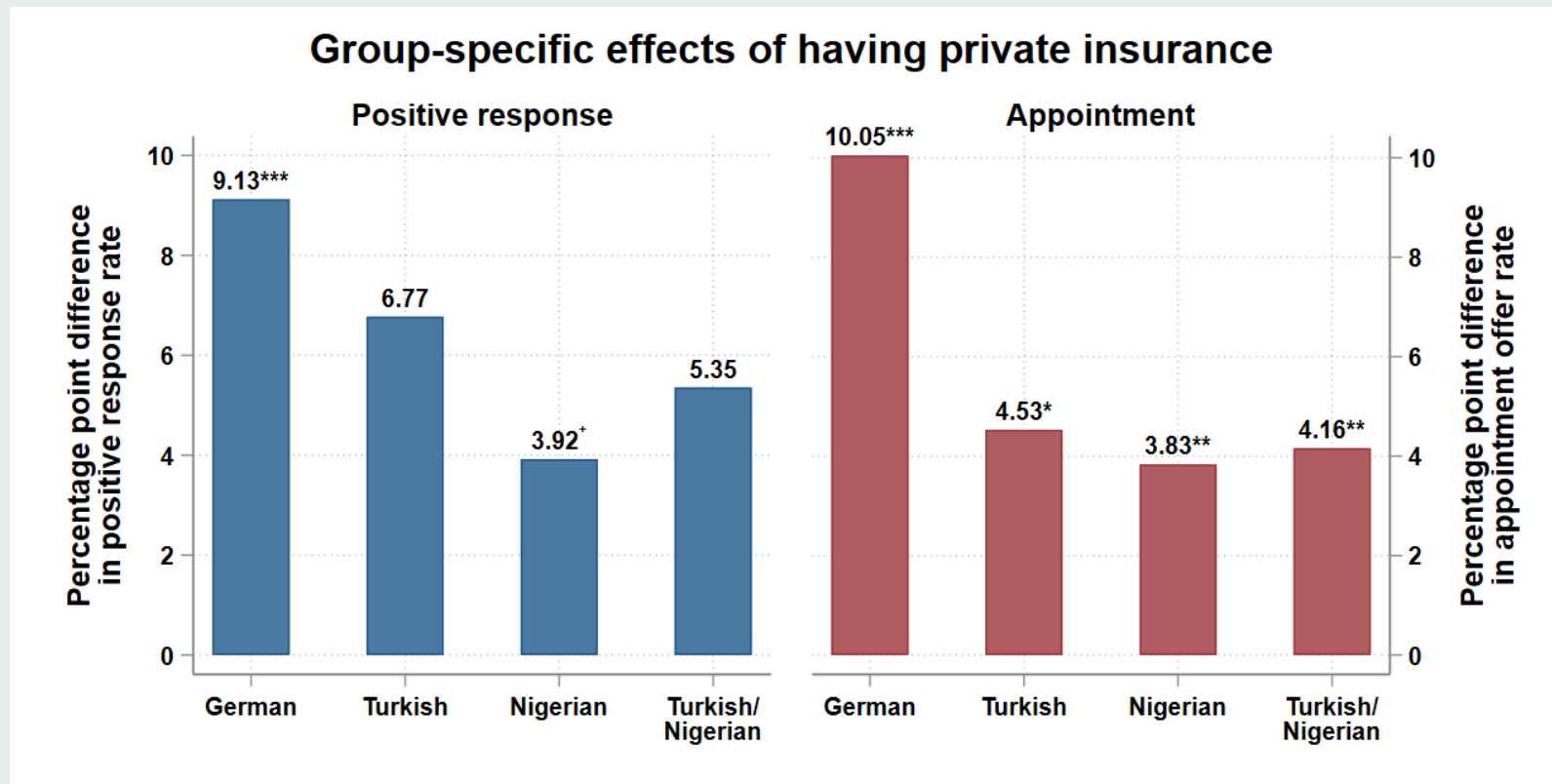
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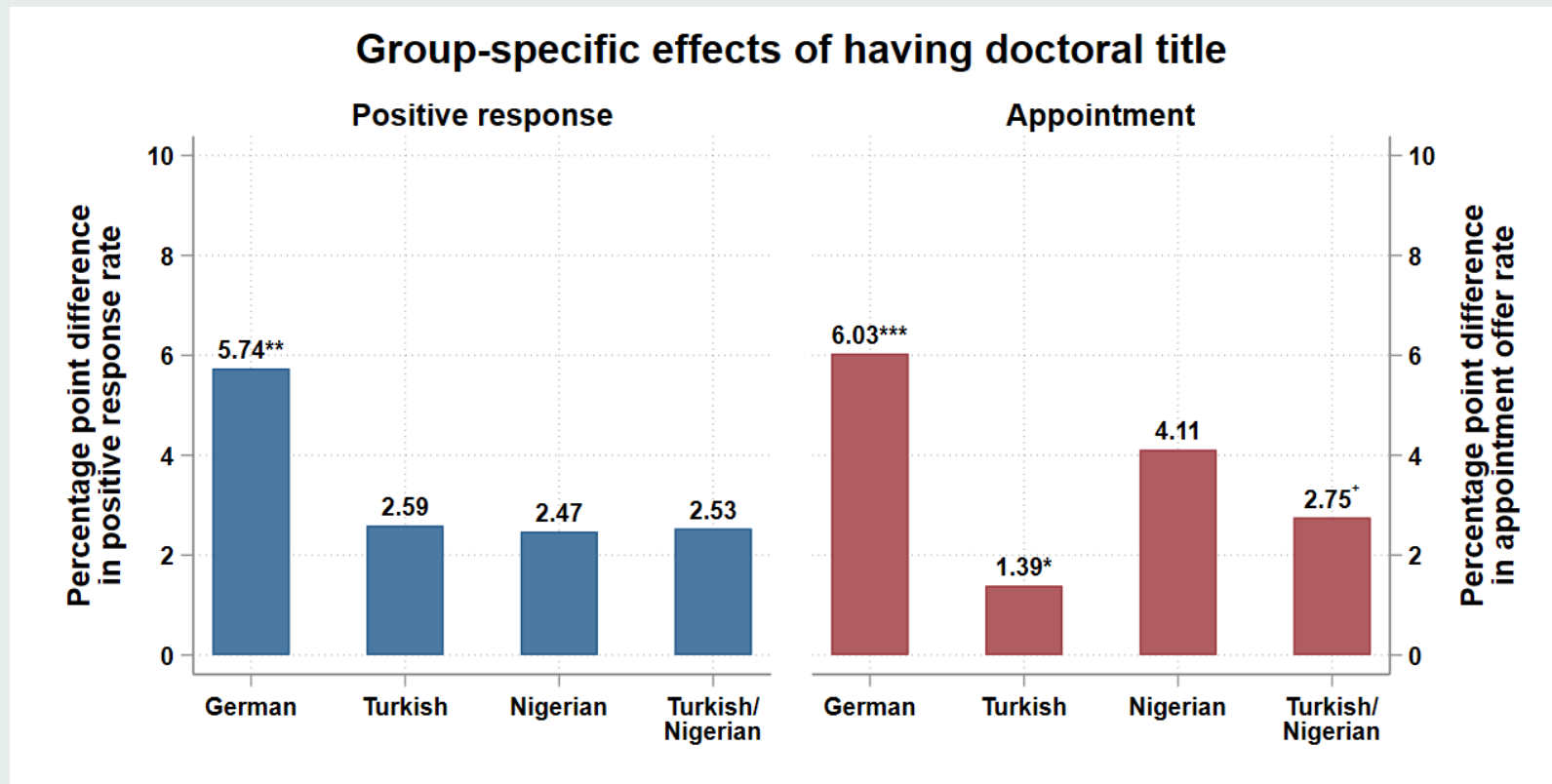
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# Marked benefits of PHI for German patients... ...weaker effects for patients with foreign-sounding names



N = 6,792. Bars show group-specific effects of private (vs. statutory) insurance status. Symbols indicate two-tailed p-values for group-specific effect (German names) and difference to effect for Germans (non-German names): + p < .1; \* p < .05; \*\* p < .01, \*\*\* p < .001.

# Similar pattern for doctoral title



N = 6,792. Bars show group-specific effects of doctoral title (vs. no title) insurance status. Symbols indicate two-tailed p-values for group-specific effect (German names) and difference to effect for Germans (non-German names): +  $p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$ .



## Further results/effect heterogeneity

- No major differences across specialties
  - Some evidence that dermatologists more strongly favor privately insured and more strongly discriminate against Nigerians (esp. for appointments)
- Practices offering communication in Turkish strongly *favor* Turkish-name patients
- No clear interactions between patient ethnicity and a) doctor ratings on Google, Jameda b) AFD vote share in the last federal election
- To be tested: physician density (competition), physician migration background (proxied by name)



# Preliminary conclusions and discussion

# Preliminary conclusions

- Solid evidence for ethnic discrimination, insurance-based discrimination, and high social status-based discrimination in access to primary care
    - Penalties for Turkish- and Nigerian-sounding names broadly similar
  - Smaller benefits of positive status signals for patients with foreign-sounding names, not helpful in overcoming ethnic discrimination
  - Immigrants and individuals with low SES suffer from higher disease burden (Lampert et al. 2018) while having lower levels health care utilization (Razum & Wenner 2016)
  -
- Findings suggest that discrimination against patients from these two groups is a contributing factor

# Discussion

- How consequential? Heckman's (1998) famous - and contested - point that the marginal employer's propensity to discriminate is decisive may carry force in this setting (more ample supply of practices than job offers)
- But discrimination in initial contact may only be "tip of the iceberg": what about (more consequential) discrimination and inequalities in quality of doctor-patient interactions & quality of care
- Open question: Who are the key gatekeepers? Doctors, medical staff, or both?

# Acknowledgments

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# References

- Kugelmass, H. (2016). “Sorry, I’m Not Accepting New Patients”: An Audit study of Access to Mental Health Care. *Journal of Health and Social Behavior*. 57(2): 168-183.
- LaVeist, T. A., Rolley, N. C., & Diala, C. (2003). Prevalence and patterns of discrimination among US health care consumers. *International Journal of Health Services*, 33(2), 331-344.
- Lee, C., Ayers, S. L., & Kronenfeld, J. J. (2009). The association between perceived provider discrimination, health care utilization, and health status in racial and ethnic minorities. *Ethnicity & disease*, 19(3), 330.
- Leech, T.G.J., Irby-Shasanmi, A., & Mitchell, A.L. (2019) “Are you accepting new patients?” A pilot field experiment on telephone - based gatekeeping and Black patients’ access to pediatric care. *Health Services Review*. 54:234-242.
- Statistisches Bundesamt 2019: Kostenstruktur bei Arzt- und Zahnarztpraxen sowie Praxen von psychologischen Psychotherapeuten - Fachserie 2 Reihe 1.6.1 – 2019
- von Haumeder A, Ghafoori B, Retailleau J. (2019) Psychological adaptation and posttraumatic stress disorder among Syrian refugees in Germany: a mixed-methods study investigating environmental factors. *Eur J Psychotraumatol*