

Assessing Panel Conditioning in the GESIS Panel

Comparing Respondents with Different Levels of Experience

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Background

- Longitudinal surveys represent a major data source for social and other areas of research
- **Validity** and **quality of survey responses** is at stake if data is affected by panel conditioning
- **Panel conditioning effects (PCE)** = artificial changes in respondents' actual behavior, attitudes, and knowledge or respondents' reporting behavior which are caused by prior survey participation (Kalton 1989; Struminskaya, 2020)

Research Questions

Do PCE exist within the GESIS Panel and how large are the effects?

How do PCE affect overall **response quality** within the GESIS Panel?

Assumptions

- Positive Conditioning
 - ▶ Reflection and „Optimizing“: *more **accurate** and **reliable answers, familiarity*** with survey content and process (Kroh, Winter & Schupp, 2016; Sturgis, Brunton & Smith, 2009)
 - ▶ Decreased ***socially desirable responding*** (Waterton & Lievesley, 1989; Wooden & Li, 2014)

- Negative Conditioning
 - ▶ Increased ***satisficing response behavior*** (Schonlau & Toepoel, 2015; Zhang & Conrad, 2014)
 - ▶ Increased ***motivated misreporting*** (Bach & Eckman, 2018)

Data

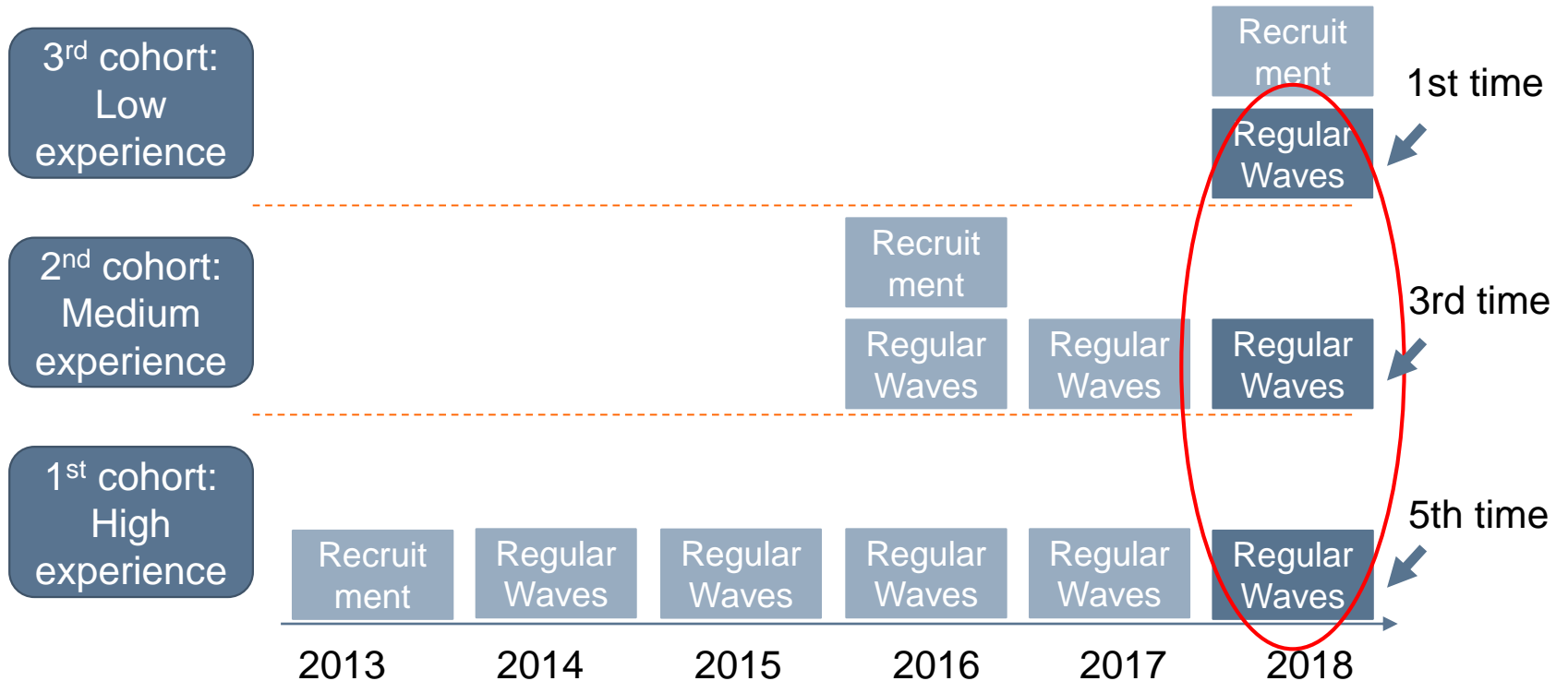
- **GESIS Panel**
 - ▶ Probability-based mixed-mode access panel
 - ▶ Running since 2014 with N=5200
 - ▶ Refreshment samples in 2016 and 2018

 - ▶ **Sample**
 - German-speaking population aged 18 years+ and permanently residing in Germany

 - ▶ **Data Collection**
 - Web-based (ca. 70%) and via mail (ca. 30%)

 - ▶ **Panel Interval**
 - Administered every two months
 - Longitudinal core studies are administered annually

Survey Experience



Data basis: **29th panel wave** with annual longitudinal core study on *media usage and work & leisure*

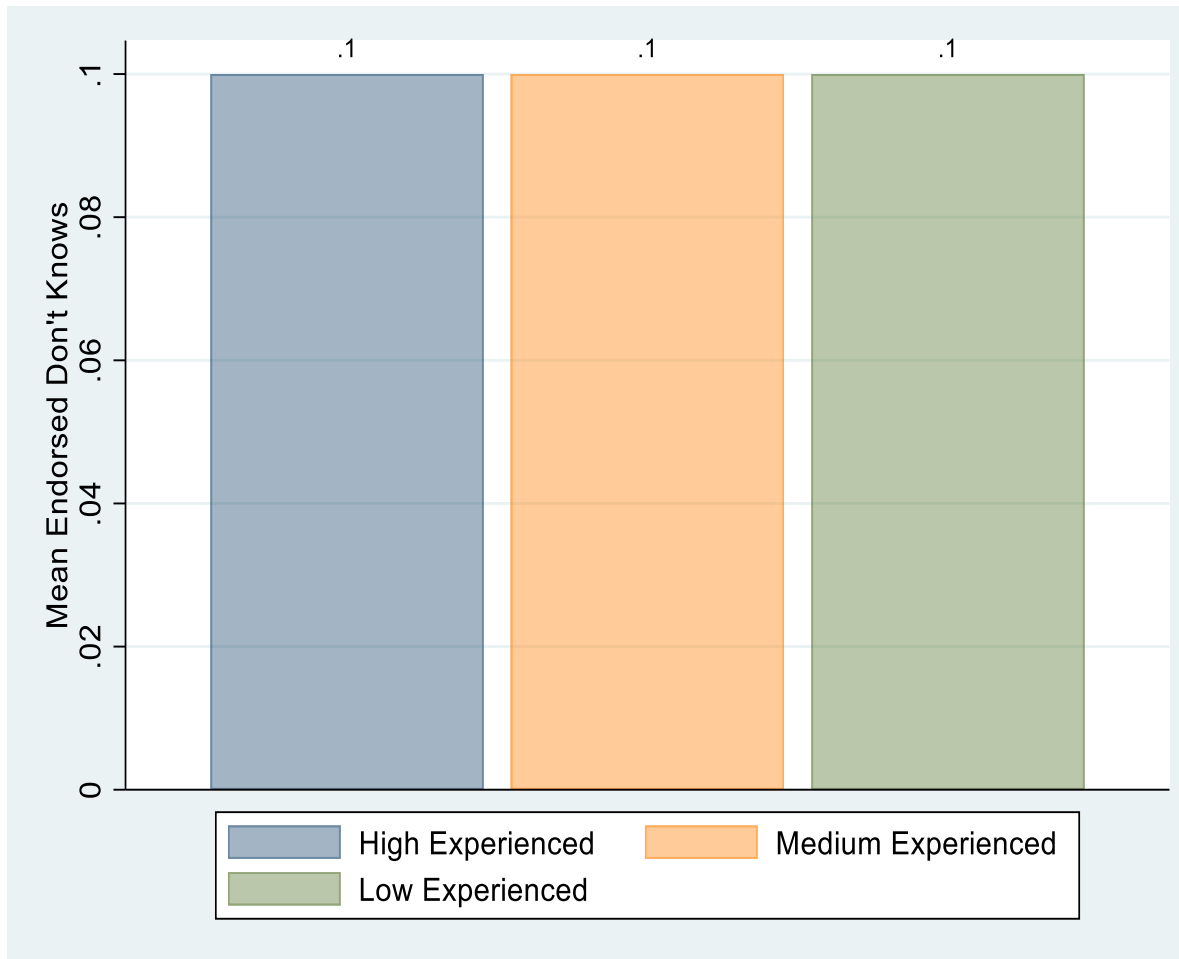
Operationalization & Methods

Type of Conditioning		Indicator	Analytics
Positive Conditioning	Reflection	Prevalence of don't know – answers	Negative binomial regression
	Optimizing	Response Latencies (total response time in sec)	Linear regression
	Decreased socially desirable responding	Item nonresponse in sensitive questions	Bivariate linear regression
Negative Conditioning	Satisficing	Speeding (threshold: 300msec per word * number of words in question)	Linear regression
		Non-Differentiation (in GRID questions)	Linear regression
	Motivated Misreporting	Number of non-triggered filter questions	Linear regression

- To account for panel attrition we applied propensity score weighting to balance covariates between groups

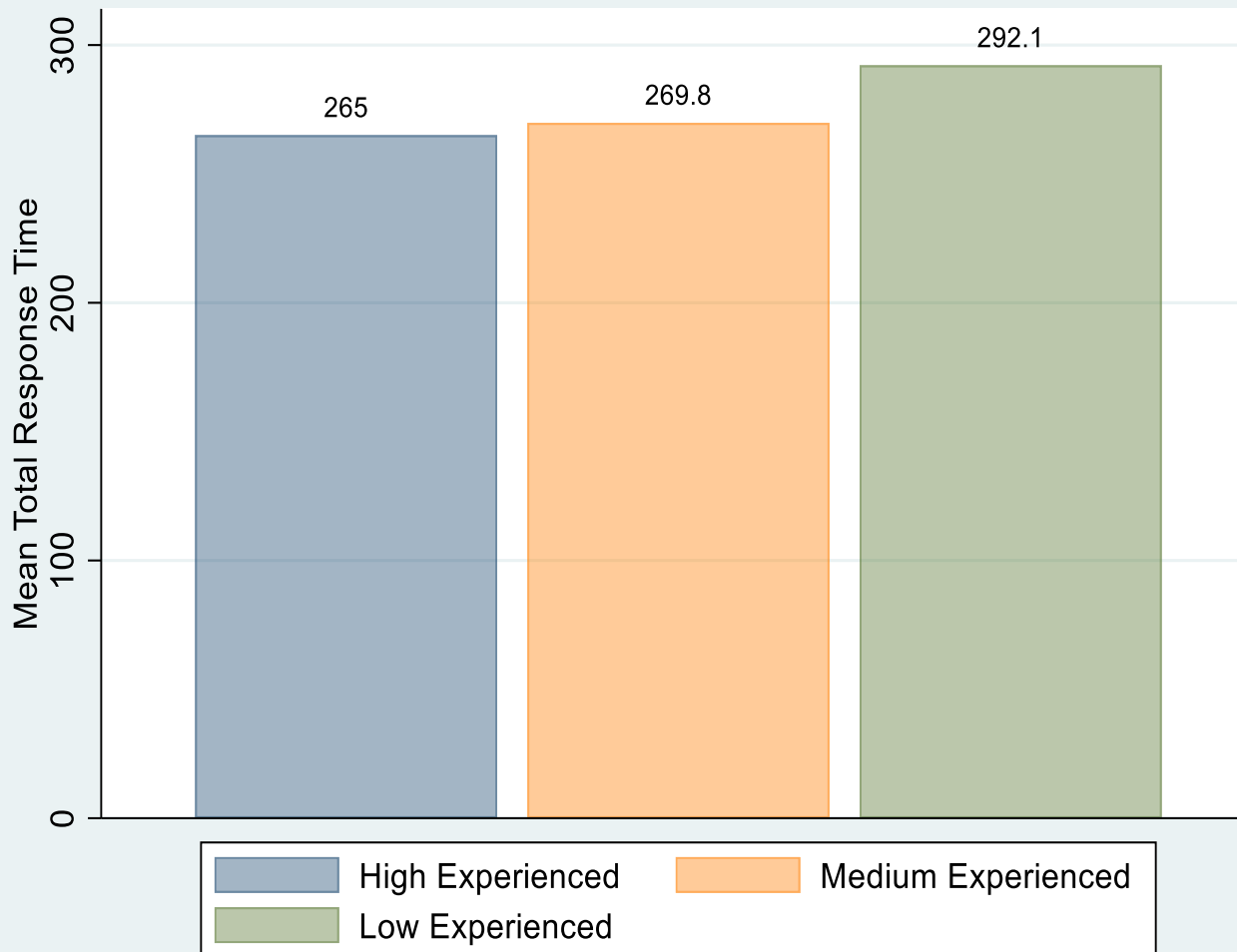
Results

Prevalence of „Don't Know“ - Answers



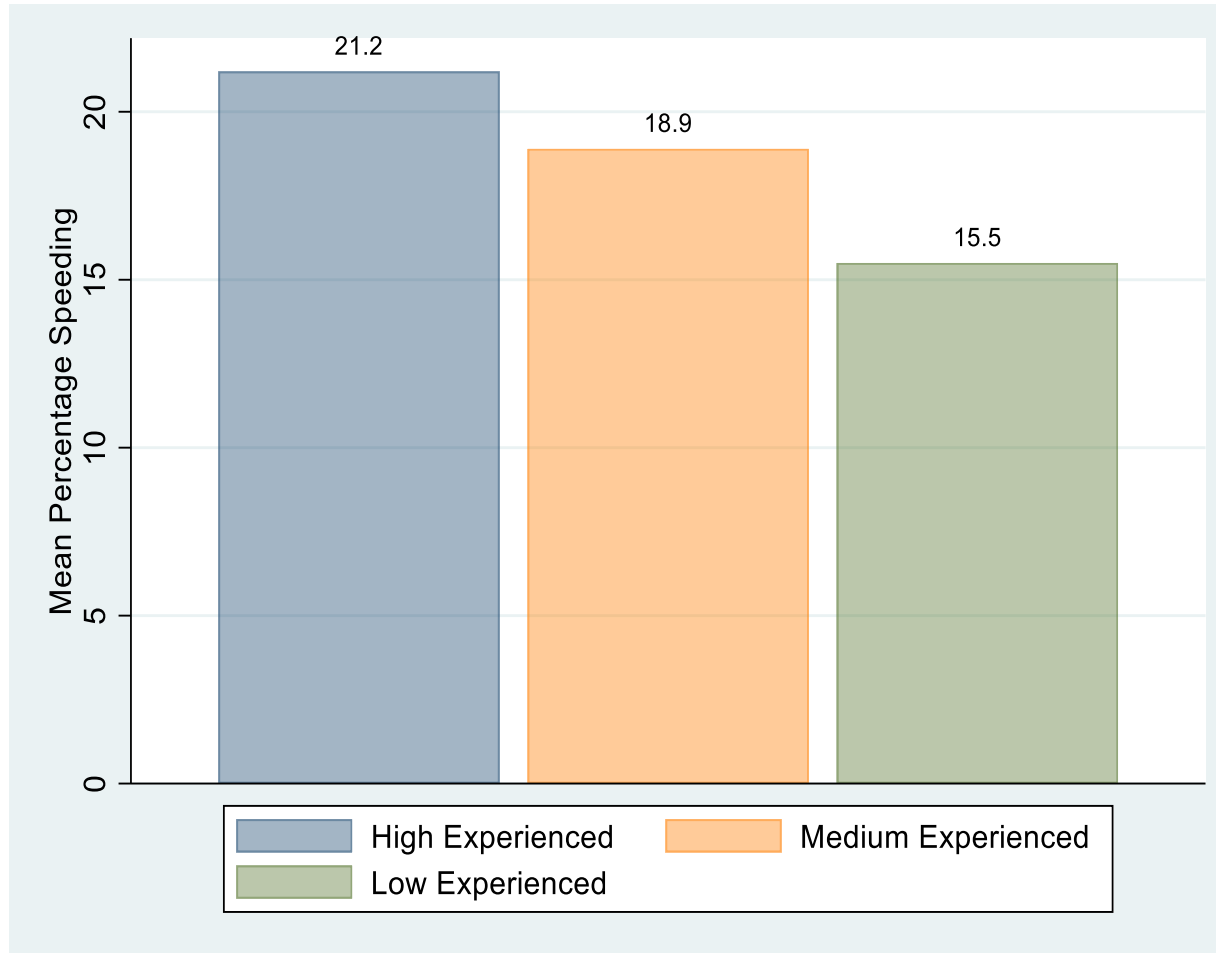
High_E ~ Medium_E **p = ns**
High_E ~ Low_E **p = ns**
Medium_E ~ Low_E **p = ns**

Response Latencies



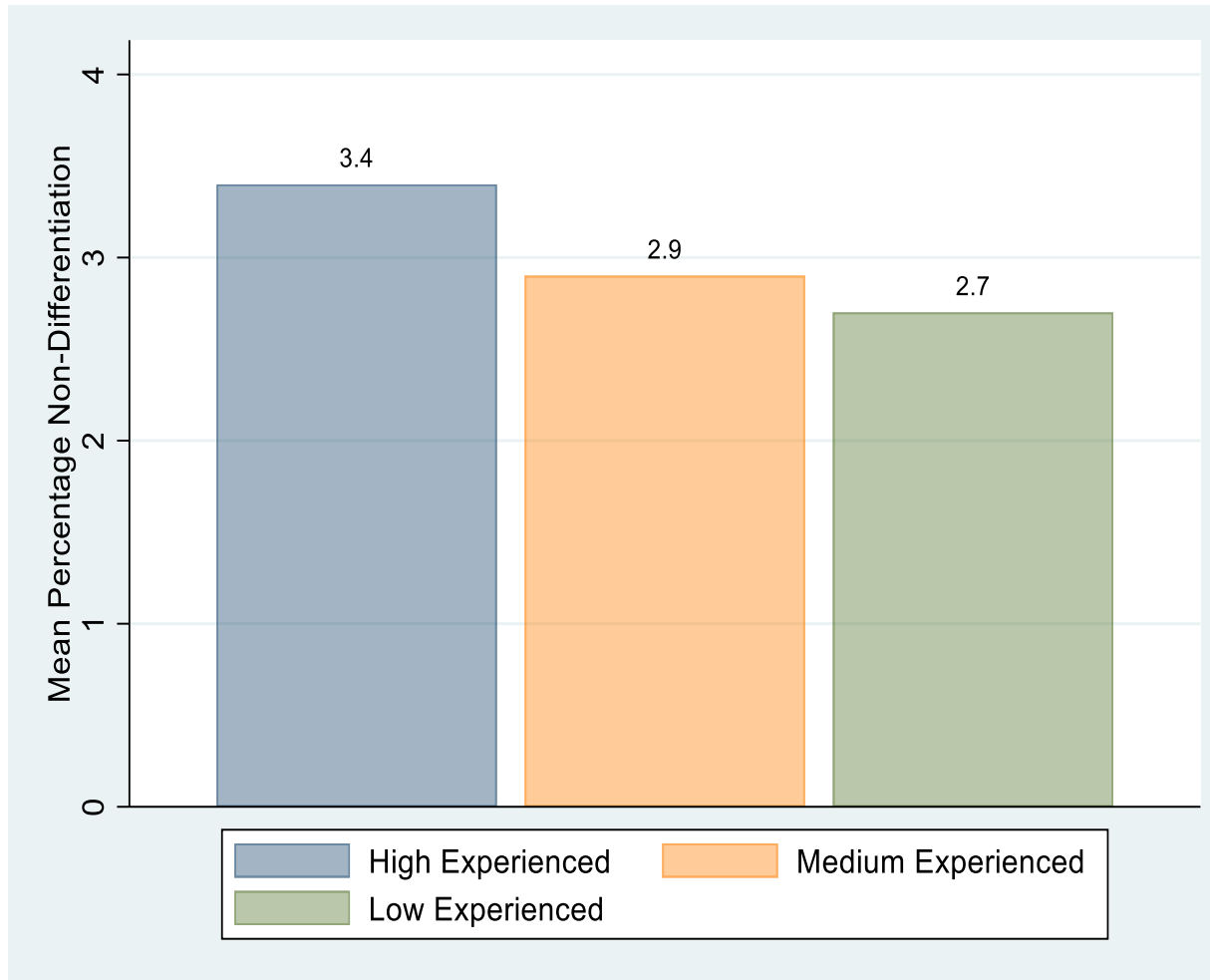
High_E ~ Medium_E *p* = *ns*
High_E < Low_E *p* < .01
Medium_E < Low_E *p* < .01

Speeding



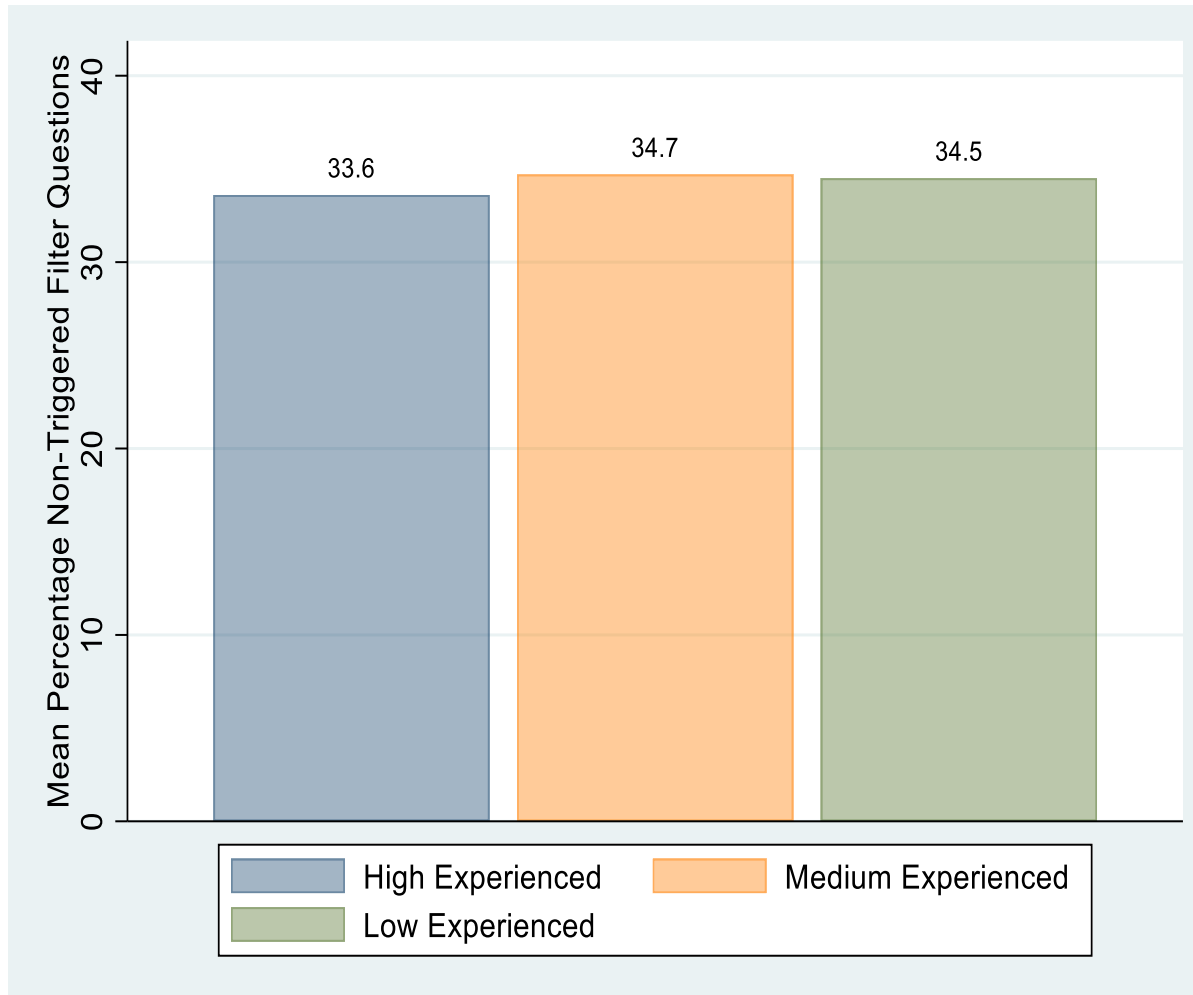
High_E > Medium_E ***p* < .01**
High_E > Low_E ***p* < .01**
Medium_E > Low_E ***p* < .01**

Non-Differentiation



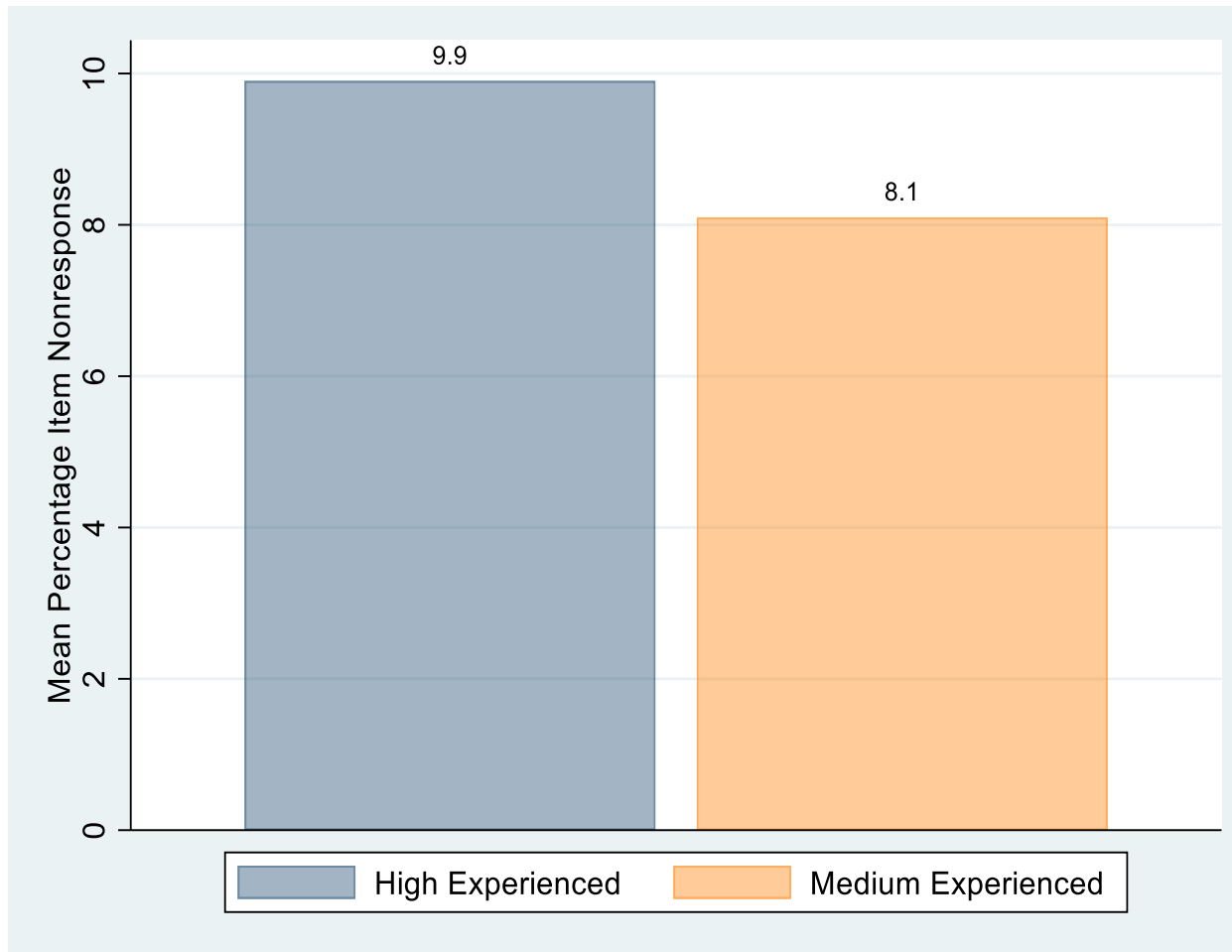
High_E ~ Medium_E ***p = ns***
High_E > Low_E ***p < .05***
Medium_E ~ Low_E ***p = ns***

Motivated Misreporting



High_E ~ Medium_E ***p = ns***
High_E ~ Low_E ***p = ns***
Medium_E ~ Low_E ***p = ns***

Item Nonresponse in Sensitive Questions



High_E > Medium_E $p < .01$

Summary

Type of Conditioning		Indicator	Assumed Effect	Result
Positive conditioning	Reflection	Prevalence of don't know – answers	decreasing with greater survey experience	X
	Optimizing	Response latencies	shorter with greater survey experience	✓
	Socially desirable responding	Socially desirable responding	decreasing with greater survey experience	X
Negative conditioning	Satisficing	Speeding	increasing with greater survey experience	✓
		Non-Differentiation	increasing with greater survey experience	✓
	Motivated misreporting	Potential motivated misreporting	increasing with greater survey experience	X
	Socially desirable responding	Item nonresponse in sensitive questions	-	Increasing with greater survey experience !

Implications and Future Research

- Evidence for positive as well as negative panel conditioning
- Overall, most effects are relatively small and partly caused by specific question formats (i.e., GRIDs and non-differentiation)
- However, speeding shows relatively large effects and we find greater SD-bias with greater survey experience
→ need for further investigation of underlying mechanisms
- Conditioning on survey content or survey process?
 - ▶ True randomized experiments are necessary to further differentiate the effects and mechanisms

Thank you for your attention.

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Any questions?

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References

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