



INSTITUT FÜR ARBEITSMARKT- UND  
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Die Forschungseinrichtung der Bundesagentur für Arbeit

# IAB-COLLOQUIUM

zur Arbeitsmarkt- und Berufsforschung

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Einladung  
15|2019

## CAN PSYCHOLOGICAL COUNSELLING PROMOTE STEM CHOICE AND REDUCE THE GENDER GAP? EVIDENCE FROM A RANDOMIZED TRIAL

**DATUM:**  
4.7.2019

**UHRZEIT:**  
13:00 Uhr

**ORT:**  
Regensburger Str. 104  
Sitzungssaal 164  
90478 Nürnberg

*Referent*

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Many industrialized countries show a huge undersupply of workers and students in the area of science, technology, engineering, mathematics (STEM). The low share of students who engage in STEM subjects is particularly noticeable among girls, whose share in many STEM subjects is still far below 20% (DESTATIS, 2017). The explanations for the gender gap are manifold and range from individual characteristics to social norms and expectations (Kanny et al., 2014). Another approach highlights the role of psychological resources and the perception of STEM fields. In a nutshell, it is hypothesized that girls refrain from STEM fields, which are commonly regarded as one of the most demanding fields of study, due to a lack of self-confidence/self-efficacy and the belief that they are able to master the challenge of a STEM study programme (van-Aalderen-Smets and van der Molen, 2018).

In this paper, we build on this theoretical argument and analyse whether a counselling workshop for high school pupils intended to foster psychological resources increases the intention to choose a MINT subject among programme participants in general and girls in particular. We rely on a pre-post design with randomized treatment assignment to analyse the effect of the workshop. To account for two-sided non-compliance, we run instrumental variable (2SLS) regression with treatment assignment as IV and actual treatment status as endogenous regressor. Our estimates show mixed results on both groups of outcomes. When it comes to psychological resources, we find a positive impact on some but not all psychometric scales that is surprisingly stronger for boys. When it comes to MINT choice, we find a positive effect for both genders but only for soft (nature) but not for hard (maths, IT and technology) MINT subjects for both genders. These results suggest that psychological counselling can promote STEM choice, while there is little evidence that the effect is stronger for girls.