

# GENDER GAP IN MEDICAL ADMISSION TEST



Medizinische Universität Graz

Habersack M, Dimai HP, Ithaler D, Reibnegger G  
Medical University Graz

## Introduction

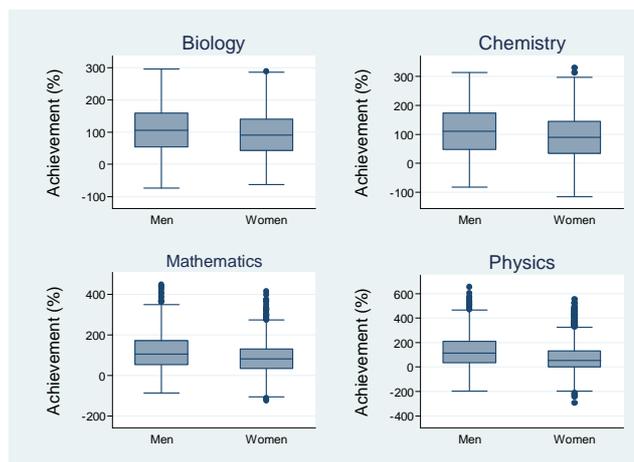
In the scientific discussion about medical college admission processes, differences in the test results of women and men are already portrayed as fact [1,2]. The results of the medical college admission tests in Austria demonstrate the slightly worse performance of women. As explanatory models for a gender gap are cited: the type of the selected test format, the design of the test items, the scientific orientation in the school of origin, the stereotyping of "hard" natural sciences as male domain, a basic science knowledge gap and the factor of *time*. In the context of the factor *time* theory approaches point e.g. to the short answering period available in connection with a multiple choice test or point to the factor of *time* in the framework of the entire course of medical studies [3-5]. Until now, the factor *time* has rarely been discussed in context of the question, whether the point of *time* of taking the Medical College Admission Test could imply a decrease of the basic-science knowledge gap.

## Methods

Observational investigation of the results of the admission test for the study of human medicine and dentistry at the Medical University of Graz, 3405 applicants (over three years) were included in the study. Statistical analyses were performed by routine methods (Chi-square test, Student's t test) using STATA 11 software (StataCorp. LP, College Station, TX, USA).

## Aims

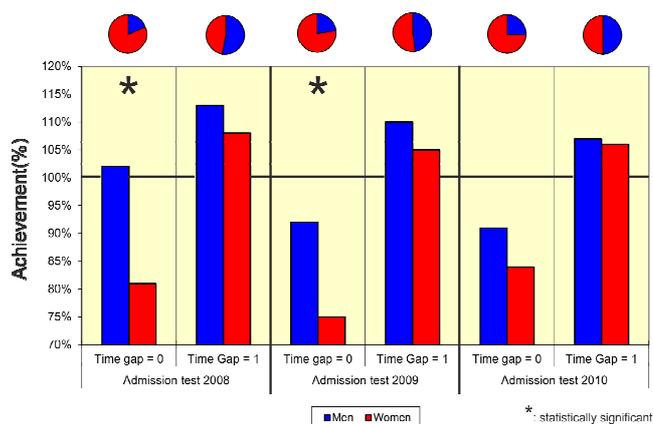
- To investigate a basic science knowledge gap among female candidates of the admission test at the Medical University of Graz.



## Results

- A clear trend to increasing gender gap according to the order (1) Biology, (2) Chemistry, (3) Mathematics, (4) Physics is noticeable: Austrian women perform particularly worse in physics. In biology, the difference between female and male Austrian applicants is smaller, but still statistically significant.

- To investigate whether the point of time of taking the examination has an influence on the test results.



- Men as well as women improved their results when they passed the admission test one year after completing their secondary education. The improvement of performance in women was so pronounced that the gender gap (significant in the group who took the admission test during the year they were completing their secondary education) could not be substantiated in this group.

## Discussion

A basic science knowledge gap in the Austrian applicants can be confirmed. Similarly, the variable time can be interpreted as an opportunity for the reduction of a basic science knowledge gap. It has to be assumed, however, that not time per se is responsible for the minimization of the gender gap in the test results, but the approximation to equally prepared applicants.

## References

- Fields HW, Fields AM, Beck FM. 2003. The Impact Of Gender On High-Stakes Dental Evaluations. *Journal Of Dental Education* 67:654-660.
- Callahan CA, Hojat M, Veloski J, Erdmann JB & Gonnella JS. 2010. The Predictive Validity Of Three Versions Of The Meat In Relation To Performance In Medical School, Residency, And Licensing Examinations: A Longitudinal Study Of 36 Classes Of Jefferson Medical College. *Academic Medicine* 85:980-987.
- Caddy MM, Swanson DE, Clauser BE. 2008. A Multilevel Analysis Of Examinee Gender And USMLE Step 1 Performance. *Academic Medicine* 83:58-62.
- Sternberg RJ. 2012. College Admissions: Beyond Conventional Testing. *Change: The Magazine Of Higher Learning* 44:6-13.
- Schwank I. 1994. Zur Analyse Kognitiver Mechanismen Mathematischer Begriffsbildung Unter Geschlechtsspezifischem Aspekt. *Zentralblatt Für Didaktik Der Mathematik* 31-40.