Relevance of the topic

Scientific findings and innovations are of great significance for the societal development and competitiveness of nation-states. Therefore it is important that the best scientists stay in academia. However, several studies show that there are groups which are systematically disadvantaged in academia. For example, women in Germany go to university as often as men. However, they are considerably underrepresented concerning professorships (Wissenschaftsrat 2012). Moreover, the chance of PhD-holders to climb the social ladder depends on their social background (Hartmann 2002). However, to our knowledge, there are no studies which focus on the chances of doctoral candidates and PhD holders with an impairment or with poor health for an academic career. We offer a contribution to close this research gap. As we use data of a survey on doctoral candidates, we focus on (academic) career objectives as an indicator for occupational orientation and on academic self-efficacy as an indicator for the subjective probability to reach the respective academic career objectives. Moreover, impairments and poor health are not unusual in tertiary education. Eleven percent of students in Germany have at least an impairment impeding their studies (Middendorff et al. 2017). About 7.5 percent of the doctoral candidates in our survey have at least one impairment impeding their everyday life, doctorate or employment. About 6.1 percent report that an impairment impedes their doctorate. Eleven percent report that their health is middle, poor or very poor (subsequently called “poor health”).

Research question

We examine the question whether or not doctoral candidates with poor health and doctoral candidates with good health differ concerning their chances in academia. Concretely, we examine the following aspects:

- the academic self-efficacy (e. g., the assessment, whether or not someone believes that (s)he is able to publish frequently in peer-reviewed journals or whether or not someone believes that (s)he is able to do research independently)
- the intention to stay in academia (universities, government-funded extra-university research institutions and departmental research institutions)
- the intention to become a professor

Theoretical background and hypotheses

There are several theoretical approaches to examine career objectives. We assume that career objectives are subject to rational consideration according to rational choice theory. The basic assumption is that humans try to maximise their benefit in consideration of restrictions (Kunz 2004: 32; Esser 1993: 222). The question which activity maximises utility does not only depend on their (possible) returns (benefit), but also on the probability of success and on the direct and indirect cost the activity induces. The probability of success is associated with the restrictions. In general, we follow the reasoning of Petzold (2017). Returns of an academic career (professorship) are, in particular: a high income, a great autonomy concerning work content and a high social status (prestige of the profession).

We assume that the probability of success concerning remaining in academia and a successful academic career is strongly influenced by the academic self-efficacy. Furthermore, we assume that doctoral candidates with an impairment/poor health have a lower academic self-efficacy than doctoral candidates without an impairment/good health. Therefore, academic self-efficacy is supposed to be a restriction for doctoral candidates with an impairment/poor health to a higher degree than for doctoral candidates without an impairment/good health. We examine the following hypotheses:

Hypothesis 1: Doctoral candidates with poor health/an impairment have a lower degree of academic self-efficacy.

Hypothesis 2: Doctoral candidates with poor health/an impairment less often intend to remain in academia than doctoral candidates with good health/without an impairment.
Hypothesis 3: Doctoral candidates with poor health/an impairment less often intend to become professor than doctoral candidates with good health/without an impairment.

Data and methods

We use data of a large-scale study in preparation of the first survey of the German National Academics Panel Study (Nacaps; www.nacaps.de). On 9th May 2018, 10,458 persons at 26 German universities where contacted by e-mail and invited to take part in the survey. There was no random sampling. Instead, the universities were selected to achieve a maximum of heterogeneity in order to draw the best possible conclusions for the survey in 2019. Therefore, in the sample "classical" universities with a broad range of fields of studies as well as specialised technical universities with only few fields of studies are included. Moreover, the universities are not concentrated regionally. They represent nine out of sixteen German federal states and are located in Western as well as in Eastern Germany. The survey was conducted from 9th to 31st May 2018 and had a focus on the conditions in which the doctorate takes place (including information on supervision), but also contained, among others, questions on international mobility, employment, personality, aims in life and health.

Results

1,766 persons took part in the survey. 195 (eleven percent) reported poor health. Our results show that doctoral candidates with poor health/an impairment and with good health/without an impairment do not differ concerning their intention to stay in academia and also do not differ concerning their intention to become professor. However, they significantly differ with regard to the most important requirement to stay in academic in the long run/become professor. Whereas 60 percent of doctoral candidates with good health dare to regularly publish in peer-review journals, the share is only 52 percent for doctoral candidates with bad health. 53 percent of doctoral candidates with an impairment impeding their doctorate affirm this statement, but (again) 60 percent of doctoral candidates without an impairment impeding their doctorate. Doctoral candidates with bad health also significantly less often state that they are able to give a lecture on an international conference (75 percent compared to 82 percent of doctoral candidates with good health).
We apply multivariate models to examine which mechanisms explain the differences between students with poor and good health concerning their academic self-efficacy. Moreover, we try to explain why there are no differences between the groups concerning plans to stay in academia and plans to become professor using multivariate methods.