

The presented idea of creating a new research group and a new research project on paranoid mechanisms was inspired by the research conducted so far and by significant deficiencies in the existing knowledge. Paranoia concerns the fear of others in the context of expected and intentional hostility on the part of others. Such fears may take the form of persecutory delusions (and occur in patients with psychotic disorders), but they may also occur in a less severe form in healthy people. Although paranoia concerns mainly interpersonal anxiety, interpersonal processes have so far been the subject of only a few studies. Our project aims to fill the gaps in the knowledge on the role of social exclusion and the condition of fear in paranoia in healthy people who experience intensive paranoid thoughts but do not have a mental illness (n=100). An important risk factor for the development of intensive paranoid thoughts (paranoia) is the intake of cannabis (THC). Therefore, in the project, we will also examine a group of people who use cannabis regularly. The results of these two groups will be compared to a control group consisting of people who do not have paranoid thoughts (n=100 people).

The proposed study will have two phases. In the first phase, we will assess how the subjects (300 people in total) function in their own environment. The so-called Experience Sample Method (ESM) will be carried out with the use of electronic diaries (delivered via a smartphone application). We will be interested in how the experienced social exclusion, conflicts (social functioning), and consumption of cannabis affect the emergence of paranoid thoughts. In the second phase, we will invite the subjects to the Virtual Reality lab to assess their sensitivity to social rejection (two experimental conditions: Rejection in a VR game and inclusion in a VR game) and the impact of rejection on the next condition of interpersonal fear (also evaluated in virtual reality). Especially for the needs of our project, we will construct experimental tasks in the virtual reality environment. This will allow for measurements close to everyday situations (so-called high ecological validity of the research). We will also use the measurement of basic physiological parameters to assess the effects of experimental interactions and fear conditioning procedures. The research groups will be compared with each other. In addition, we will be interested in the relationship between genes and the phenomena we study. Therefore, we will take genetic material from saliva to test the relationship between genes associated with dopamine transmission and the variables studied (sensitivity to exclusion, fear conditioning, and paranoia).

Our study will be conducted with a leading paranoid research center led by Prof. Daniel Freeman, Oxford University, and will be the first study to combine ESM, virtual reality, and genetic methods in paranoia. We expect the new research project to provide interesting knowledge to complement existing theoretical models of paranoia. In particular, we expect to demonstrate intergroup differences in sensitivity to rejection and their impact on the conditionality of interpersonal fear. This relationship (rejection of greater conditionality of fear) will relate to paranoid thoughts. We also expect that genetic predispositions in interaction with sensitivity to rejection and fear conditioning predict paranoia.

Our project will provide new knowledge on paranoia mechanisms, which will be presented in a series of publications in prestigious scientific journals. In addition, the knowledge from the project may be applied in clinical practice in working with people who have thoughts or paranoid symptoms.