

According to the Police statistics, pedophilic child molesting are among the most common sexual offences in Poland. Although there is a great diversity of concepts concerning the etiology of sexual violence, the current knowledge about its biological background remains highly insufficient.

Conclusions that might be drawn from the current research data suggest that pedophiles are characterized by poor emotional recognition and control as well as significant deficits in behavioral control (high levels of impulsivity). Importantly, the conclusions from these studies are limited by the self-declarative nature of the collected data and potentially biased by social desirability effect, and prone to deception. Moreover, the neural mechanisms underlying the aforementioned behavioral deficits in pedophiles are still poorly understood. Earlier studies found functional and structural abnormalities of specific brain regions. Nevertheless, it is still unclear whether these brain abnormalities are responsible for the behavioral and emotional deficits observed in pedophiles.

The general objective of the project is to investigate neuronal and psychological correlates of pedophilic child molesting. We intend to assess the cognitive and emotional determinants of sexual child abuse, including intentional and automatic aspects of cognitive processing. Specifically, we will compare the ability to recognize the emotional and mental states of others as well as decision-making and behavioral control in pedophiles and control subjects. Using Magnetic Resonance Imaging methodology, we also plan to investigate the neuronal mechanisms of the mentioned above processes.

In order to describe the distinct features of pedophilic child molesters, the study population will comprise four groups:

- 1) Pedophilic child molesters,
- 2) Individuals who were diagnosed with pedophilia but who did not engage in child sexual abuse,
- 3) Rapists,
- 4) Healthy individuals.

Our project will provide the new essential observations reflecting the mechanisms underlying altered sexual preferences in pedophiles. Better understanding of neuropsychological causes and determinants of impulse control deficits leading to pedophilic child molesting, may significantly increase the effectiveness of diagnostic and therapeutic interventions provided for this group.