

## The Settlement Fund Report

*The Speed of Recovery from Olfactory Adaptation by Jennifer Lai (0901409)*

### ***Background***

Olfaction (smell) is an important sense and plays a significant role in daily life: determining the flavour of foods and alerting us to environmental dangers such as fire, spoiled foods and toxic fumes. However, olfactory irregularities (such as impaired olfactory identification) have been widely reported in individuals with autism spectrum disorders (ASD).

Some individuals with ASD also display atypical responses to sensory stimuli, which can be classed according to hypersensitivity (increased sensitivity which could cause pain) and hyposensitivity (decreased sensitivity which may result in unresponsiveness to certain stimuli). It may be that these atypical responses are the cause of the high rates of feeding difficulties in children with autism (approximately 70-90%).

Olfactory adaptation is a process where the prolonged or repeated exposure to odours result in a decrease in how strongly the olfactory system responds. There has been relatively little research in olfactory adaptation, and this research project was the first to investigate recovery times from olfactory adaptation in relation to AQ score.

### ***Aim***

This research project investigated whether the speed of recovery from olfactory adaptation varies with autism quotient (AQ) score. The AQ score is a measure of quantity and severity of autistic traits of individuals in the general population.

### ***The Settlement Fund***

The settlement fund allowed the purchase of various materials for the project, such as the body spray, the eye mask, the dust masks and the card strips.

### ***Main Findings***

This research project did not find any differences in recovery times in regard to AQ score, nor gender, smoking status or the use of a hormonal contraceptive. It may be that this is because relationships do not truly exist, or because of flaws in the methodology.

It must also be noted that comparing individuals with low and high AQ scores is not the same as comparing individuals with and without autism. Although no differences were found in relation to AQ score, it is still a possibility that discrepancies in recovery from olfactory adaptation result in the atypical responses to odours seen in many individuals with autism, and consequently result in the high rates of feeding difficulties.

This project was presented at the British Psychological Society Undergraduate Conference at Abertay University, Dundee. It is likely that the presentation alerted others to the possibilities that recovery from olfactory adaptation hold, and perhaps

future research will stem from this project and consequently improve the quality of life of individuals with autism.