

## **ASDEU – mid-programme news**

### **Early detection and intervention**

#### **Update on activities:**

The main objective of ASDEU programme's work in this area is to create a guidance document on early screening, diagnosis and intervention. This will be based on current best practice and include the identification of key parameters and biological markers to help identify children who may be on the autism spectrum, where diagnosis and early intervention would be recommended.

This work is taking place in two main strands. The first is examining the effectiveness of screening, diagnosis and early intervention; and the second that of non-genetic biological markers and non-social behavioural features for autism.

Out of thousands of screening and early intervention studies reviewed, the results of 15 screening studies and 300 programme studies have been analysed. And there have been 20 focus groups dedicated to analysing early detection and diagnosis, in which 155 people participated – both professionals and families – in 11 different European countries. There have been a further nine focus groups on early intervention in which 71 professionals and family members participated in nine different countries.

The other strand of research has systematically reviewed thousands of articles on biomarkers and non-social behavioural features, with 132 studies about bio-markers and 26 studies on behavioural features fully analysed. Based on the outcome of these studies, a series of questions has been developed, which will be included in a survey for professionals to support the development of guidance.

#### **Progress and learning:**

Through both the literature review and focus groups, the study has already identified that in order for there to be more effective early screening, diagnosis and intervention:

- There needs to be greater co-ordination between clinical and research expertise in planning screening and diagnostic programmes
- Professionals want more training
- Families want professionals to provide more support around diagnosis and better diagnostic services away from urban centres

In terms of non-genetic markers that could potentially support early diagnosis and intervention in the future, the most promising biomarkers identified are:

- Brain structure: larger total brain volume – larger amygdala and structural differences in corpus callosum
- Brain function: deviant brain activity to speech
- Brain electrophysiology: differences in connectivity
- Immune function deficiency as indicated by cytokine and antibody levels
- Incidence of neonatal jaundice and asphyxia

And the most promising non-social behavioural features are:

- motor functioning
- repetitive/stereotyped behaviour

#### **Next steps:**

The online surveys for early intervention will be launched and available from ASDEU partner sites from early January 2017. Responses will be analysed in March 2017, with the final report in preparation from May.

**[You can find out more about progress from the early intervention studies on the ASDEU website here.](#)**