

Neurobehavioral outcome in adolescents with FASD

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Specific Aims

- Specific Aim #1
 - evaluate longterm outcome for FASD in adolescence
- Specific Aim #2
 - assess the neurocognitive profile of FASD subjects
- Specific Aim #3
 - obtain further understanding concerning the neurobiological pathology and structural abnormalities using MRI and MRS

Finnish project 2003 - summer 2004

- Gathering a group of FASD patients
- Telephone interview
- Magnetic Resonance Spectroscopy (MRS) study
- Dysmorphology evaluations
- Maternal interviews
- IQ screen (WISC-III/WAIS-III)

Finnish FASD group

- About 70 children and young adults with a preliminary diagnosis of FAS/FAE (age range 8 to 20 years) from a clinical patient pool at the University of Helsinki
- Cigarette smoking during pregnancy very common
- Other substance abuse (cannabis, heroin, amphetamin etc) during pregnancy very rare in Finland before late 90s – FASD group with very few mixed prenatal substance exposure

Finnish FASD group

- Slightly more girls (58%) than boys (42 %)
- Mean age 13, age range 8-20 years
- By June 18, 2004 a total of 43 patients evaluated by Eugene Hoyme

Patient evaluation

- family history
- pregnancy history
- birth history
- medical history
- developmental history
- dysmorphology exam

Information gathered via review of patient records
and interview of foster families

Patient evaluation

I. Diagnosis according to Revised IOM Classification

1) FAS with confirmed maternal alcohol exposure
average dysmorphology score = 19 (range 14-25) n=23

2) Partial FAS with confirmed maternal alcohol exposure
average dysmorphology score = 11 (range 7-16) n=14

3) Deferred (R/O ARND)
average dysmorphology score = 5 (range 2-10) n=4

4) Not FAS n=2
Both with unknown malformation syndrome –
chromosome abnormalities

Patient evaluation

II. Consortium Dysmorphology Core Scoring Sheet

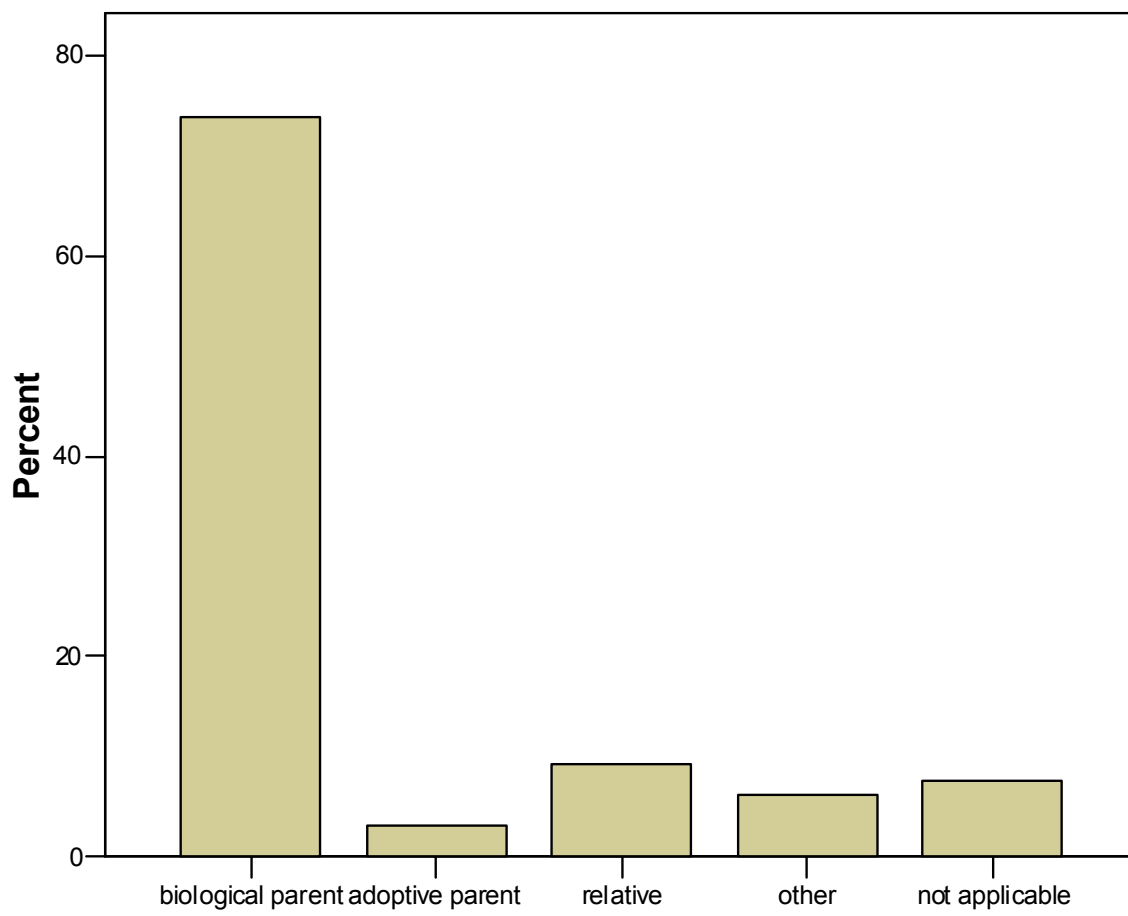
1) FAS	n=30
2) Deferred	n=9
3) Not FAS	n=4

Finnish FASD group

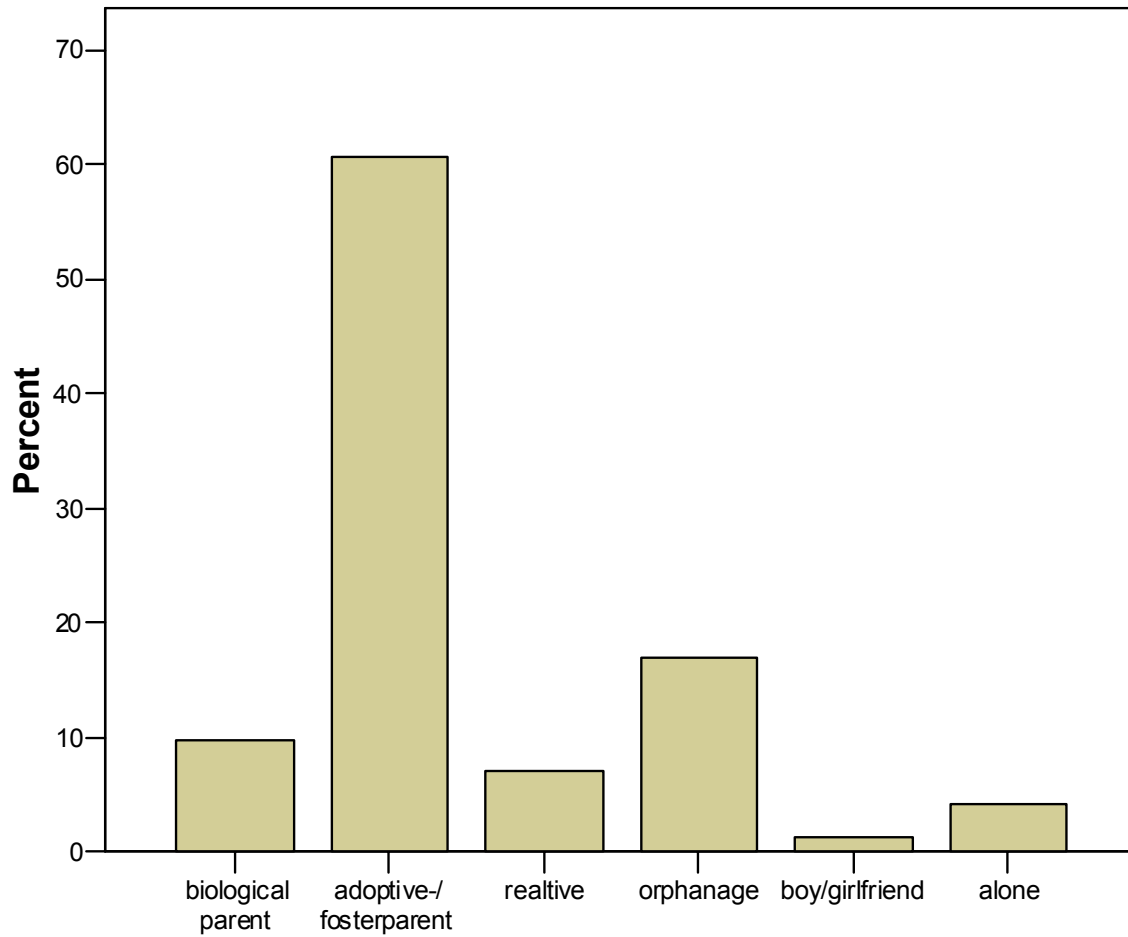
- Brief telephone interview covering
 - Placement, home environment
 - Schooling
 - Drug abuse
 - Additional disabilities
 - Health care follow-ups

Total N = 71

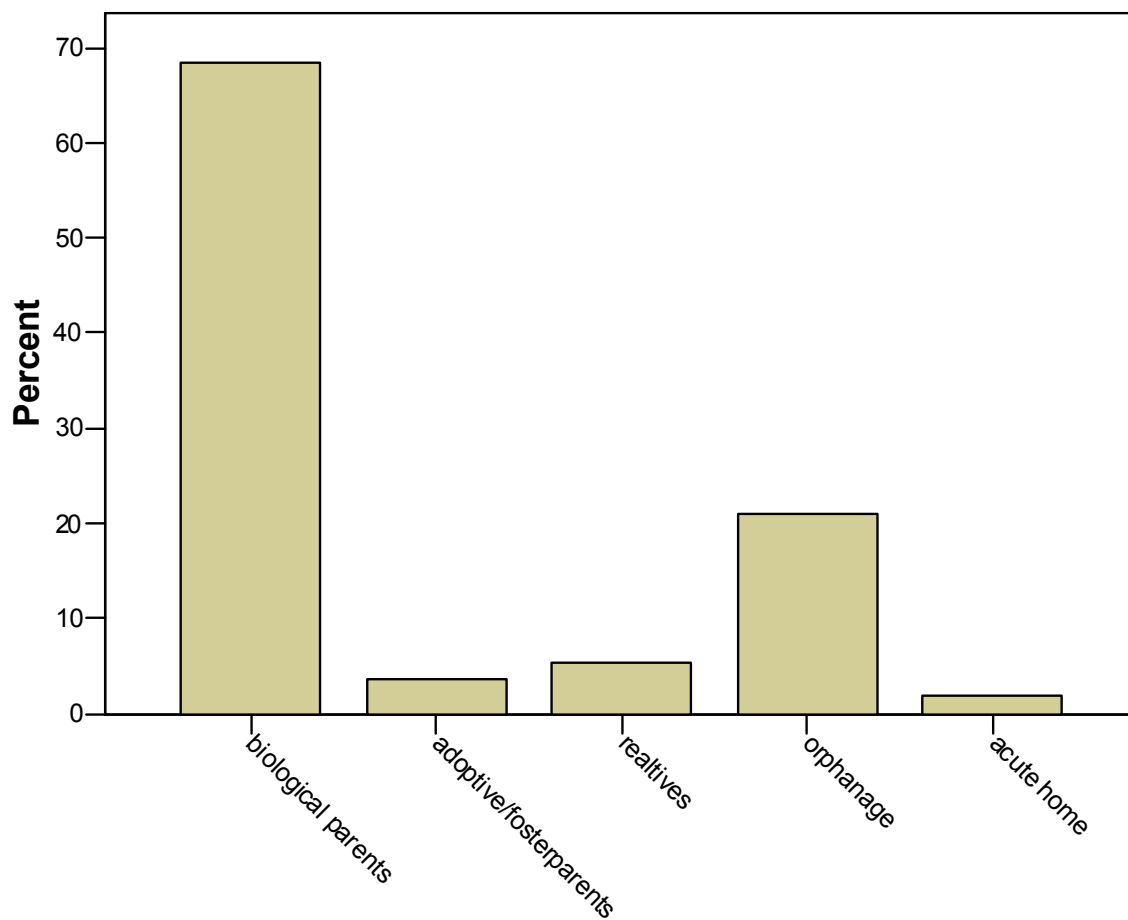
Legal guardian



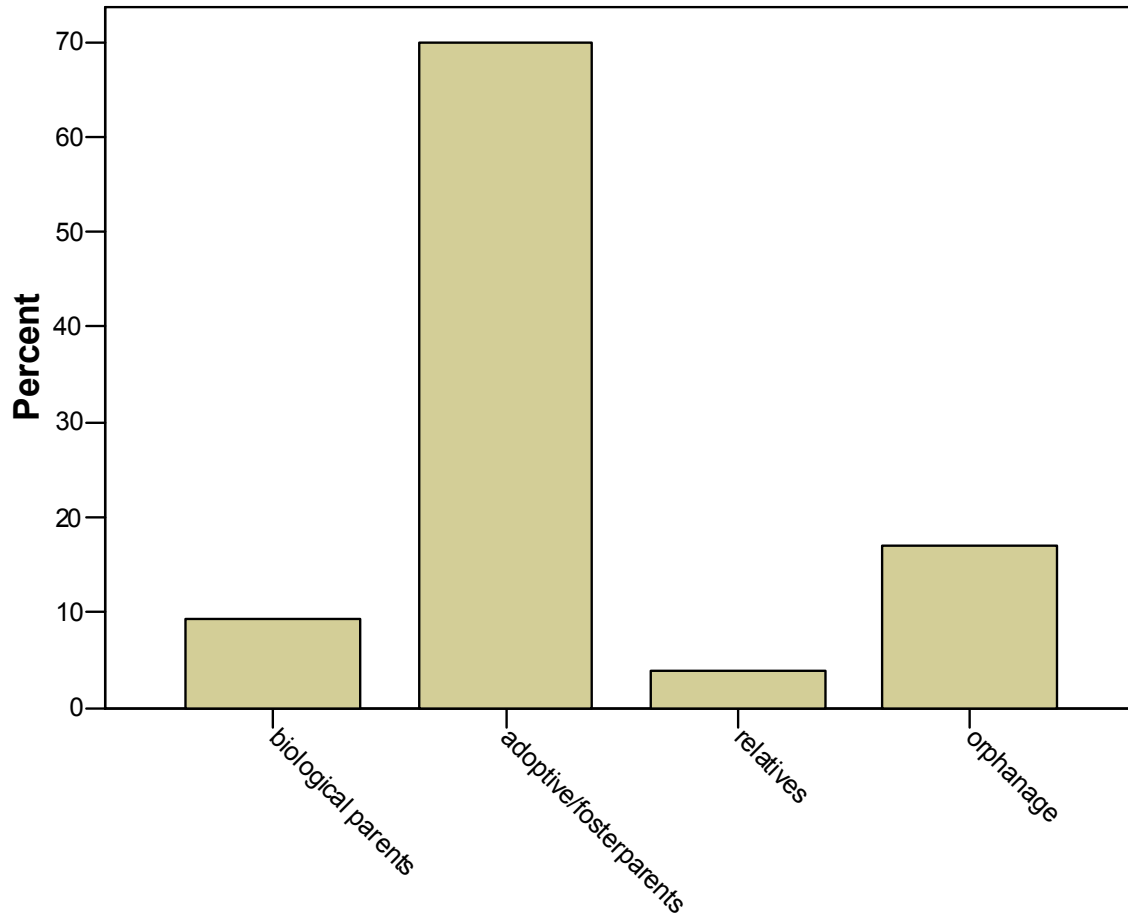
Living conditions



Home environment 0-1 year of age



Home environment, 8-12 years



Placements

- Placed between homes on average 4 times/moved 3 times, number of placements vary between 1 and 13

School

- 93 % in school
- 1.4 % (1 subject) working
- 1.4 % (1 subject) unemployed

- 25.4 % normal class and curriculum
- Additional 10 % manage in normal class with extra teacher guidance
- Remaining children (around 64 %) in special classes and/or adapted curriculum

School (2)

- Personal aid – 17 %
- Disciplinary problems in school – 11 %
- Truancy – 10 %
- Problems with peers – 27 %
- Restlessness, not able to concentrate – 28 %

Health

- Alcohol and/or drug abuse – 1.4 %
- Almost 60 % other chronic illness or disability
 - Asthma, CP, Epilepsy, Allergy, Heart problems, back problems, visual problems, hearing problems, problem with dental crowding and braces etc.

Health (2)

- Almost two thirds (63 %) still in regular health care check-ups
- 20 % psychotherapy
- 35 % speech therapy
- 23 % occupational therapy
- 21 % physiotherapy

- Not aware of diagnosis – 30 %

Plans for 2004 autumn

- Neuropsychological testing - FASD group
- Teacher reports
- 3D camera pictures

Plans for 2005

- Examine control/contrast groups (n=60-70)
 - Neuropsychological testing
 - Maternal interviews
 - Teacher reports
 - Dysmorphology evaluation

Plans for 2005

- Neuroimaging
 - Volumetric MRI
 - MEG
 - (fMRS)
 - (fMRI)