**Supplementary table 3: Reported FASD diagnostic criteria and prenatal alcohol exposure levels in the included articles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Reference** | **Groups included** | **FASD diagnostic criteria; Assessor** | **PAE (Quantitative values)** | **PAE (Descriptive values)** |
| Hanson 1976 | FAS | NR | - | Heavy: all mothers “chronically alcoholic” |
| Majewski 1981 | PAE | NA; children diagnosed with alcohol embryopathy | Mean: 172g AA/d | - |
| Steinhausen 1982 | FAS, Control | Majewski 1978 & maternal drinking history.Assessor: 2 paediatricians | FAS:Mean daily consumption: 140±72g | - |
| Strömland 1982 | FAS | NR | - | Maternal history of alcohol abuse during pregnancy (100%) |
| Beattie 1983 | FAS | NR | - | All mothers were heavy drinkers |
| Strömland 1985 | FAS, non-exposed, IGR | Fetal alcohol study group (Rosett 1980).Assessor: Team of paediatricians | - | \*FAS: 27 mothers had alcohol abuse, 3 were chronic alcoholics, most were heavy drinkers. 5/30 mothers subsequently died from alcohol abuse.\*Non-exposed: Some had PAE no more than sporadically at special events. |
| Church & Gerkin 1988 | FAS | Fetal alcohol study group (Rosett 1980)Assessor: Paediatrician or dysmorphologist or neonatologist | - | All mothers were “alcoholics” |
| Carones 1992 | FAS, Control | Minimal criteria proposed by Rosett 1980Assessor: Paediatrician | NR | NR |
| Spohr 1993 & 1994 | FAS | Research Society of Alcoholism 1989Assessor: Paediatrician | NR | NR |
| Strömland 1996 | FAS | Research Society of Alcoholism 1989Assessor: Team of paediatricians | - | All mothers had alcohol abuse in pregnancy. 40% mothers died at median 38y from alcoholism, 16% were able to take care of their children |
| Hellström 1997a, 1997b, 1999 | FASD/FAS | Research Society of Alcoholism 1989Assessor: Team of paediatricians | NR | NR |
| Egeland 1998 | FAS | 1) FAS suspected/diagnosed by physician; 2) PAE/maternal history of alcohol abuse; 3) FAS facial features; 4) Growth deficiency; & 5) CNS impairmentAssessor: Physician | - | PAE or maternal history of alcohol abuse |
| Steinhausen 2003 | FASD, Control | Research Society of Alcoholism 1989Assessor: NR, although recruitment from a “specialized paediatric centre” | NR | NR |
| Kvigne 2004 | FAS, Control | Centers for Disease Control 1994Assessor: NR, diagnosed if diagnostic criteria documented in medical records | - | Alcohol abuse defined as heavy, binge drinking, &/or daily use.FAS:Alcohol-related medical problems: 81.4%Alcohol abuse at any time recorded in chart: 95.3%Referral to alcohol treatment: 79.1%Control:Alcohol-related medical problems: 19.8%Alcohol abuse at any time recorded in chart: 39.5%Referral to alcohol treatment: 25.6% |
| Carter 2005 | FAS, Non-FAS | 1) 3 FAS facial features; 2) growth retardation (<10th percentile for height and weight, or <3rd percentile for head circumference); 3) evidence of poor CNS dysfunctionAssessor: 2 dysmorphologists | Average 6.4 drinks/occasion in pregnancy | - |
| Viljoen 2005 | FAS, Control | IOM 2005Assessor: 2 dysmorphologists | NR | NR |
| May 2007 | FAS, PFAS, Control | IOM 2005Assessor: 2 paediatric dysmorphologists | Mean drinks/wk in pregnancy:FAS: 13.0±13.6PFAS: 4.9±3.5[*p*=0.018]Control: 6.0±7.71 | - |
| Elgen 2007 | FAS, FASD | Centers for Disease Control 2004Assessor: Neuropaediatrician | - | PAE confirmed from obstetric/social welfare records, or maternal self-report |
| Ervalahti 2007 | FASD | IOM 2005Assessor: Dysmorphologist | - | Heavy (not defined), determined from patient records/other reliable source (biological parent/guardian) |
| Moore 2007 | FAS, Control | IOM 1996Assessor: Dysmorphologist | NR | NR |
| Ribeiro 2007 | FAS, Control | Research Society of Alcoholism 1989Assessor: Neurodevelopmental paediatric department | - | Strong history of maternal alcohol abuse during the pregnancy |
| Elliott 2008 | FASD | IOM 1996Assessor: Paediatricians | High risk: Birth mother or witness report of ≥4 std drinks in 1 sitting ≥1/wk or binge drinking (>5 std drinks in 1 sitting): 94.4%Some risk: Birth mother or witness report of alcohol intake <high risk category: 5.4% | - |
| Flanigan 2008 | PAE, Control | NA | Heavy drinking: ≥2 oz AA/d (mean: ≥48g):Prior to pregnancy knowledge: 9.7 (range: 5.3-19.1) std drinks/dAfter pregnancy knowledge: 5.8 std drinks/d:- 7 (16%) stopped: 4 (9%) stopped in 2nd trimester; 3 (7%) stopped in 3rd trimester | - |
| Andersson Grönlund 2010 | FAS, Control | 4-DDC 2004Assessor: Multidisciplinary team | - | FAS: Suspected PAE in 12/15 children diagnosed with FAS |
| Astley 2010 | FASD, PAE (normal CNS) | 4-DDC 2004Assessor: Multidisciplinary team | FASD:Moderate/UNK: 570 (44.9%)High: 693 (54.6%)PAE (normal CNS):Moderate/UNK: 56 (43.1%)High: 74 (56.9%) | - |
| Landgren 2010 | FAS | IOM 1996Assessor: Multidisciplinary team | - | Alcohol abuse in biological mother stated in charts or reported to adoptive parents. “UNK” exposure if PAE was not disconfirmed |
| May 2011 (incl. May 2006 participants) | FASD, Control | IOM 2005Assessor: Multidisciplinary team | Maternal reports of drinking during pregnancy:FAS: 50.0%PFAS: 54.8%Controls: 40.0%Post-pregnancy drinking:Mean number of drinks/wk:FAS: 10.37±18.92PFAS: 1.78±4.02Control: 1.52±2.8[*p*<0.001]Mean drinks/drinking day:FAS: 1.56±2.69PFAS: 0.63±0.53Control: 0.61±0.52[*p*=0.006] | - |
| Vernescu 2012 | FASD, Control | Canadian 2005Assessor: Paediatrician/geneticist | NR | NR |
| Coffman 2013 | FASD, Control | IOM 1996Assessor: NR | NR | Maternal alcohol consumption confirmed by maternal interview, multiple eyewitness reports, or legal records |
| Suttie 2013 | FASD, PAE, Control | IOM 2005Assessor: 2 dysmorphologists | Alcohol-consuming women:Weekdays: 2.8 std drinks/dWeekends: 8.9 std drinks/occasionFAS (n=22):1.8±2.4 oz AA/d4.7±2.8 oz AA/occasion2.0±1.9 d/wkPFAS (n=26):1.2±1.2 oz AA/d4.2±2.8 oz AA/occasion1.9±1.0 d/wkHealthy-exposed (n=75):1.3±1.8 oz AA/d4.4±4.0 oz AA/d1.7±1.4 d/wkHealthy control (n=69):0 alcohol exposure[*p*<0.001] | - |
| Strömland 2015 | FASD, Controls | IOM 2005Assessor: Multidisciplinary team | - | PAE data available for 84/94: Maternal alcohol abuse (50%), both parents abused alcohol (35%) |
| Biyik 2019 | PAE | NA | - | Alcohol during pregnancy details known for n=784/1018:\*Alcohol before pregnancy recognition: 98 [12.5%]\*No alcohol in pregnancy: 307 [39.2%]\*Alcohol throughout pregnancy: 379 [48.3%] |
| Blanck-Lubarsch 2019 | FAS, Control | German diagnostic guideline (Landgraf 2013)Assessor: Paediatrician | NR | NR |

Level of PAE is recorded if the data were available. In cases where the data were not presented, only the method of assessment for PAE is recorded.

4-DDC = University of Washington 4-Digit Diagnostic Code; AA = absolute alcohol; CNS = central nervous system; d = day; FAS = fetal alcohol syndrome; FASD = fetal alcohol spectrum disorders; IGR = intrauterine growth retardation; IOM = Institute of Medicine; NA = not applicable; NR = not reported; PAE = prenatal alcohol exposure; PFAS = partial fetal alcohol syndrome; std = standard; UNK = unknown; wk = week.