

Electronic Supplement: Outline of prospective studies investigating the association between adverse childhood experience and asthma onset (*n*=12)

First Author (year)	Cohort (<i>n</i>) Country	Stress Measure (Instrument)	Asthma Measure	Follow up	Controlled Asthma Risk Factors	Key Conclusions
Bethesda (2010) (two papers)	Population Birth Cohort (984) USA	Parental Stress (PSI) Ethnic Minority Status	Physician Diagnosis	7½ Years	Gender, IUTSE, SES, Respiratory Illness	PSI not significantly associated with either early or late asthma onset (OR 0.99, 95%CI 0.97-1.01 & OR 1.01, 95%CI 0.98-1.04 respectively) Minority status is independently associated with asthma onset (OR 2.77, 95%CI 1.39-5.49)
Calam (2005)	'NACMAAS' – Population Birth Cohort (411) UK	Parental Mental Health Difficulties (HAD, GHQ)	Parent Reported Wheeze	5 years	None	Parental mental health difficulties are not significantly associated with development of wheeze (ORs not provided)
Clougherty (2007)	Community Birth Cohort (413) USA	Violence Exposure (My Child's ETV Scale)	Physician Diagnosis	6 years	Maternal Asthma, IUTSE, Maternal Education, Gender	ETV is not independently associated with asthma onset (OR 0.98, 95% CI 0.78-1.22). Exposure to high levels of traffic related air pollution is associated with asthma onset only within the high ETV group (OR 1.63, 95%CI 1.14-2.33) suggesting a 'synergistic' effect
Cookson (2009)	'Avon Longitudinal Study' - Population Birth Cohort (5,810) UK	Maternal Anxiety in Pregnancy (CCEI)	Physician Diagnosis	7½ years	Maternal Age, Maternal Education, Maternal Health During Pregnancy, Multiple Pregnancy, FHA, IUTSE, Gender, Birth Weight, Gestation,	Maternal anxiety in pregnancy is independently associated with asthma onset (OR 1.64, 95% CI 1.25-2.17) for the highest quartile compared to the lowest quartile.

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Guxens (2014)	Generation 'R' – Population Birth Cohort (4,848) Netherlands	Maternal Distress in Pregnancy (BSI)	Parent Reported Wheeze	6 years	Postnatal Parental Distress, Prenatal Paternal Distress, IUTSE, Education, Ethnicity, Familial Asthma & Atopy History, Pets, Parental BMI, Gestational Age, Sex, Birth Weight, Breastfeeding, Day Care, Household Smoke Exposure, RTI, Eczema History	Maternal psychological distress during pregnancy is associated with wheeze onset (OR 1.60, 95% CI 1.32-1.93) suggesting a possible 'intrauterine programming' effect.
Klennert (2001)	Genetically At Risk Population Birth Cohort (145) USA	Parenting Difficulties (PRS)	Physician Diagnosis	6-8 years	Sex, Household Smoke Exposure, IgE, Eczema, RTI,	Parenting difficulties are associated with asthma onset (OR 2.07, 95% CI 1.15-3.71).
Kozyrskyj (2008)	Population Birth Cohort (13,907) Canada	Maternal Distress (Diagnosis of Depression/Anxiety)	Physician Diagnosis	7 years	Sex, Family Asthma History, Antibiotics, RTI, SES	Chronic exposure to maternal distress is associated with an increased risk of asthma onset (OR 1.25, 95% CI 1.01-1.55)
Shankardass (2009)	'Children's Health Study, Southern California' - Community Cohort (2,497) USA	Parental Stress (PSS)	Physician Diagnosed	3 years	SES, Age, Gender, Race/Ethnicity, Maternal Smoking, IUTSE, RTI, Parental Education, BMI, Family Asthma History, Pets, Household Smoke Exposure, Household Damp	Risk of asthma onset amongst those exposed to high TRAP is significantly increased only amongst high parental stress group (HR 1.51, 95% CI 1.16-1.96)
Suglia (2010) (two papers)	'Fragile Families & Child Wellbeing Study' – Population Birth Cohort (2,013) USA	Inter-Partner Violence (Maternal Report at 12 & 36 months). Housing Disarray (Assessed by Investigator)	Physician Diagnosis	3 years	SES, Maternal Smoking, IUTSE, Maternal Race/Ethnicity, Maternal Education, Birth Weight, Household Smoke Exposure, Maternal Asthma	Chronic IPV exposure (Occuring at both 12 & 36 months) is related to asthma onset (OR 1.8, 95% CI 1.0-3.5) Housing Disarray is associated with asthma onset (OR 1.5, 95% CI 1.1-2.0). Combined IPV exposure and housing disarray is associated with asthma onset (OR 4.6, 95% CI 1.0-21.8) indicating a multiplicative

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Wright (2002)	Genetically At Risk Community Birth Cohort (496) USA	Parental Stress (PSS)	Parent Reported Wheeze	14 months	SES, Sex, RTI, Family Asthma History, Birth Weight, Household Smoke Exposure, Breast Feeding	Parental stress is associated with onset of wheeze (RR 1.4, 95% CI 1.1-1.9)