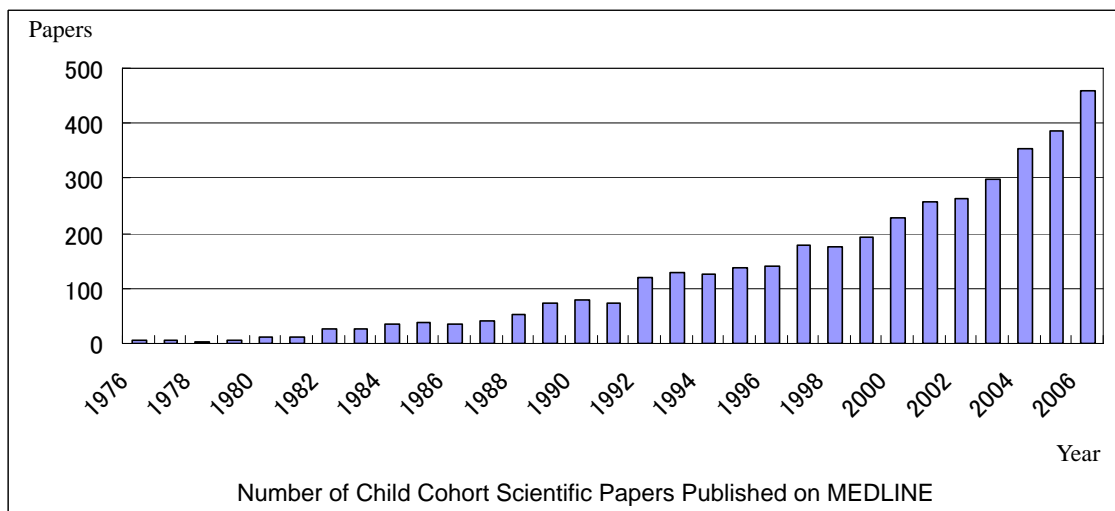


Trends in Studies and Research for Child Cohort Studies

1. Number of Scientific Papers on MEDLINE by Year

A search of was conducted on MEDLINE (PubMed) using the keywords “birth,” “cohort,” and “child.” The graph below summarizes the number of scientific papers found on MEDLINE by year of publication.

Fig. 1. Number of Child Cohort Scientific Papers on MEDLINE

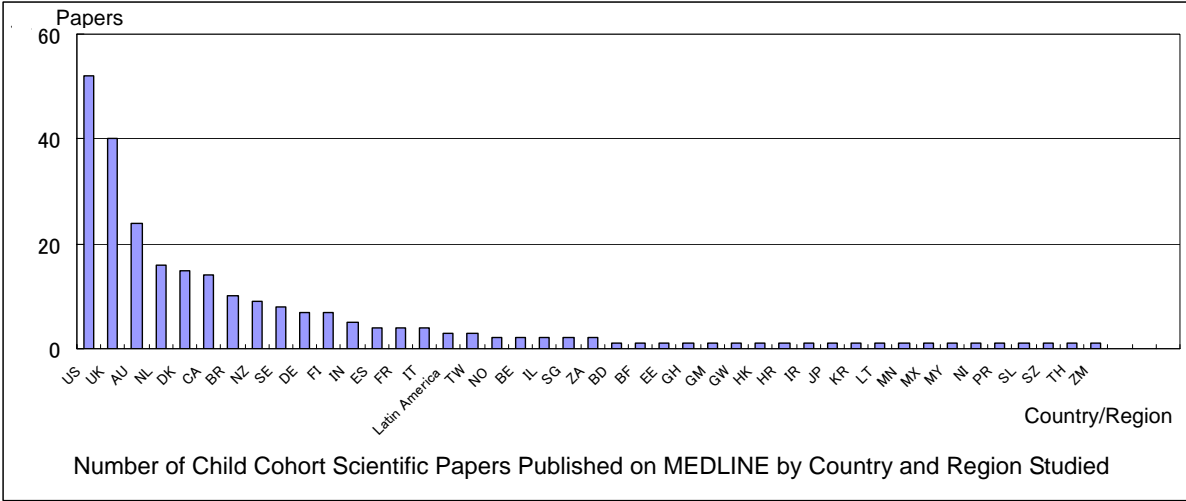


Note: At the time that this document was prepared (March 2008), a full listing of scientific papers published in 2007 was not yet complete for the MEDLINE database. Therefore, the above chart is restricted to scientific papers published through 2006.

2. Number of Scientific Papers on MEDLINE by Country and Region Studied

The chart below summarizes the number of new scientific papers published on MEDLINE by country and region studied, for papers released in January 2007 or later and published on MEDLINE through September 2007.

Fig. 2. Number of Child Cohort Scientific Papers on MEDLINE by Country and Region Studied (From January–September 2007)



Note: The data are based on the country or region studied by the cohort, as indicated in abstracts. Excluded are cohort studies that involved new recruitment of adults and papers involving review or meta-analysis.

3. Types of Outcomes Studied in Scientific Papers

The charts below summarize the type of outcomes studied in the 290 scientific papers that were published on MEDLINE from January–September 2007 (Fig. 2).

Table 1. Outcomes by Order of Frequency

Outcomes	No.
Weight	23
Mental and neurological illness	18
Health	17
Asthma	13
Intelligence	12
Allergies	11
Respiratory symptoms	9
Behavior	8
Biochemistry	6
Neurodevelopment	6
Mother-to-child HIV infection	6
Growth	5
Antisocial behavior	5
Blood pressure	5
Development	4
Diameter of retinal blood vessels	3
Diabetes	3
Autism	3
Accidents	3
Infectious disease	3
Survival	3
Leukemia	2
Sex characteristics	2
Socioeconomic status	2
Eczema	2
Teeth	2
Eyesight	2
Epilepsy	2
Care	2
Attention Deficit Hyperactivity Disorder (ADHD)	2
Brachial plexus palsy	1
Nasal congestion	1
Pneumonia	1
Pain	1
Middle ear infection	1
Physiology	1
Sleep disorder	1
Nephritis	1
Heart attack	1
Food intake	1
Diet	1
Digestive disease	1
Infectious digestive disease	1
Menarche age	1
Plagiocephaly	1
Adipose tissue	1
Melanoma	1
Cleft palate	1
Thrombocytopenia	1
Smoking	1
Ophthalmic nerve	1
Coronary heart disease	1
Pollutant intake	1
Use of medical facilities	1
Genetics	1
Teenage pregnancy	1
Cytomegalovirus infection	1
Hepatitis B	1
Hepatitis A	1

Table 2. Outcomes by Grouping

Outcomes	No.	Subtotal
Mental and neurological illness	18	60
Intelligence	12	
Development	4	
Neurodevelopment	6	
Behavior	8	
Antisocial behavior	5	
Autism	3	
Attention Deficit Hyperactivity Disorder (ADHD)	2	
Epilepsy	2	
Asthma	13	33
Allergies	11	
Respiratory symptoms	9	
Weight	23	23
Health	16	21
Growth	5	
Blood pressure	5	
Biochemistry	6	
Mother-to-child HIV infection	6	
Socioeconomic status	2	
Diameter of retinal blood vessels	3	
Diabetes	3	
Accidents	3	
Infectious disease	3	
Survival	3	
Leukemia	2	
Sex characteristics	2	
Eczema	2	
Teeth	2	
Eyesight	2	
Healthcare	2	
Brachial plexus palsy	1	
Nasal congestion	1	
Pneumonia	1	
Pain	1	
Middle ear infection	1	
Physiology	1	
Sleep disorder	1	
Nephritis	1	
Heart attack	1	
Food intake	1	
Diet	1	
Digestive disease	1	
Infectious digestive disease	1	
Menarche age	1	
Plagiocephaly	1	
Adipose tissue	1	
Melanoma	1	
Cleft palate	1	
Thrombocytopenia	1	
Smoking	1	
Ophthalmic nerve	1	
Coronary heart disease	1	
Pollutant intake	1	
Use of medical facilities	1	
Genetics	1	
Teenage pregnancy	1	
Cytomegalovirus infection	1	
Hepatitis B	1	
Hepatitis A	1	

Note: Table 3-1 lists outcomes by order of frequency. Table 3-2 groups similar outcomes, and lists the outcomes by grouping order. Both tables use identical data.

4. Types of Exposures Studied in Scientific Papers

The charts below summarize the types of exposures studied in the 290 scientific papers that were published on MEDLINE from January–September 2007 (Fig. 2).

Table 3. Type of Exposures

Exposures	No.	Exposures	No.
Birth weight	19	Amblyopia	1
General exposures	16	Perinatal events	1
Parents' smoking	9	Growth spurts after birth	1
Economic status	8	Delayed fetal development	1
Maturity at birth	8	Impairments	1
Breast milk	6	Superior vena cava (SVC) flow	1
Genetics*	5	Humerus growth	1
Medical treatment	5	Diet concerns	1
Vaccination	4	Parents' age	1
Mental and neurological illness	4	Parent–child relationship	1
Allergens*	4	Hydronephrosis	1
HIV	3	Sexual abuse	1
Antibiotics	3	Growth stimulation	1
Weight	3	Biochemistry	1
Comprehension	3	Place of birth	1
Ethnicity	3	Congenital anomalies	1
Virus infection*	2	Twins	1
Home environment	2	Fetal brain sparing	1
No. of children	2	Placenta anomalies	1
Medical treatment	2	Air pollution*	1
Father's education	2	Cerebral cortex growth	1
Father's weight	2	Cannabis	1
Feeding behavior	2	Dehydration symptoms	1
Weight, height			
Intelligence	2	Long gestation period	1
Mother's age			
Intelligence	2	Cesarean birth	1
Mother's age	2	Violence against dependent's mother	1
Hepatitis A vaccine	1	Tachypnea	1
Intracytoplasmic sperm injection (ICSI)	1	Infertility treatment	1
Immunoglobulin E (IgE)*	1	Father's criminal history	1
In vitro fertilization (IVF)	1	Welfare status	1
Bullying	1	Mother's alcohol intake	1
Care	1	Care provided by mother	1
Tobacco, alcohol	1	Mother's cocaine use	1
Tobacco, alcohol, coffee	1	Mother's testosterone level	1
Dexamethasone	1	Mother's intake of vitamin supplements	1
Television viewing	1	Mother's involvement	1
Cats	1	Mother's health	1
Homocysteine*	1	Mother's employment status	1
Leptins, etc.*	1	Mother's difficulties	1
Period of vaccination	1	Mother's menarche age	1
Perineal sensation	1	Mother's diet	1
Ocular tension	1	Mother's mental condition	1
Bronchopulmonary dysplasia	1	Mother's obesity	1
Weight of siblings	1	Breastfeeding	1
Blood pressure	1	Organophosphorous pesticides	1
Language ability	1	Childhood allergic rhinitis	1
Respiratory disease	1	Childhood respiratory disease	1
Thyroid hormones	1	Childhood middle ear infection	1
Behavior	1	Adoption	1
Fatty acid intake	1	Asthma	1

Many of the exposure values are obtained from responses to questionnaires. The table below lists exposures that require chemical analysis of biological or environmental samples in order to obtain exposure values.

Table 4. Exposures Requiring Measurement by Chemical Analysis

Exposures	Medium	Items Measured
Genetic	Blood, urine	TCF7L2 rs7903146 T allele IL13 polymorphism Interleukin-1 receptor antagonist (IL1RN) polymorphism Integrin beta 3 genotype (SNPs in ITGB3) Haplotype of SFTPA
Allergens	Dust	Dust mite, grass allergen Bacterial endotoxin, beta (1,3)-glucans and fungal extracellular polysaccharides (EPS) (dust) Endotoxin and allergen exposures (dust) Dust mite allergen and endotoxin
Virus	Blood Feces	Human parechovirus 1 (HPeV1) Rotavirus infections by G12 strains
IgE	Blood	IgE
Homocysteine	Maternal blood	Homocysteine
Leptin, etc.	Blood	Glucose, insulin, and leptin concentrations
Fatty acids	Blood	Omega-3 / omega-6 fatty acids
Air pollutants	Air	Nitrogen dioxide PM(2.5), particles with a 50% cut-off aerodynamic diameter of 2.5 µm and soot
Organophosphorous pesticides	Urine (mother, child) Urine (mother)	Six nonspecific dialkylphosphate (DAP) metabolites Metabolites specific to malathion (MDA) and chlorpyrifos (TCPy)