NSW Child Development Study
Overview - Stage 1: 2011-2016

Summary

The NSW Child Development Study is a 15-20 year project to identify early childhood vulnerability and resilience markers for a variety of health, social, and well-being outcomes in adolescence and young adulthood in a NSW population cohort. Improved knowledge of these factors will enable the identification of childhood risk profiles for adverse health and other outcomes, and is envisaged to inform policy changes, and the development of effective early intervention and prevention programs.

The project uses as its starting point a NSW population cohort of ~87,000 children for whom teachers completed the Australian Early Development Index (AEDI) on school entry in 2009 (i.e., age ~5 years). The first stage of analyses of these data (2011-2015) comprises two key components: (1) multi-generational inter-agency record linkages (record linkage 1 – 2013; record linkage 2 – 2015) and (2) cross-sectional population survey of child functioning (self-report) at age 11 years. By administering a cross-sectional survey of mental health and well-being to this cohort in 2015, we plan to identify putative risk profiles in middle childhood that may confer vulnerability for later antisocial behaviour and poor mental health, and to examine the relationships of these profiles to early childhood (birth to age 5) indicators of functioning (i.e., social, emotional, cognitive, behavioural, and physical factors).

Funding partners and current status

The first four years of this longitudinal study (2011-2014) are funded partially by an Australian Research Council Linkage Grant, in which the NSW Ministry of Health, NSW Department of Education and Communities (DEC), and NSW Department of Family and Community Services are full partners; with additional funding from an Australian Rotary Health Research Grant. The first record linkage (i.e., birth to age 5 AEDI assessment) was undertaken in late 2013/early 2014.

The cross-sectional "Middle Childhood Survey (MCS)" of the children in 2015 is supported by a National Health and Medical Research Council Project Grant (2014-2016). Completion of online questionnaires by Grade 6 students (age ~11 years) will be facilitated by teachers in all government, Catholic, and independent schools in NSW. Ethical approval has been received from the UNSW Human Research Ethics Committee for the conduct of a feasibility study in 2014 to test the content and procedures of the MCS.

In addition, this funding supports a partnership with the national mental health initiative, *KidsMatter Primary (KMP)*, to facilitate prompt and sustainable translation of research findings regarding the impact of *KMP* into improvements in policy and practice for mental health promotion, prevention, and early intervention. The inclusion of information from *KMP* will examine whether, and to what degree, participation in this program builds resilience in those children who took part compared with those who did not. This will provide an independent evaluation of *KMP* and inform future initiatives of these kinds.

Aims

i) The primary aim of the first phase (2011-2015) of this project is to identify putative risk profiles at age 11 years which may confer vulnerability for later antisocial behaviours and poor mental health. Given the strong heritability of these conditions, we will use parental history of schizophrenia, bipolar disorder, major depressive disorder, and criminal antisocial behaviour (identified via record linkage) as a starting point to determine risk-profiles evident in mental health and well-being indices among offspring surveyed at age 11. The distribution of these risk-profiles will then be assessed in the remainder of the cohort of children (i.e., those who do not have a parental history of these mental disorders or criminal antisocial behaviour) to determine the prevalence of risk for these adverse outcomes in the entire NSW population.

ii) The second aim is to identify the early childhood (i.e., age 0-5 years) predictors of these risk profiles at age 11 and the contextual factors (e.g., quality of family/community networks) that modify the impact of those early childhood predictors on risk profile at age 11. To achieve this aim, record linkage of various health, welfare, and education databases with both the AEDI data (age 5) and the cross-sectional MCS data (age 11) is required.

iii) The third aim is to measure the extent to which implementation of *KMP* is associated with a lowering of the prevalence of the age 11 risk profiles, and to what extent *KMP* modifies the impact of the early childhood (age 0-5) predictors of risk profile at age 11. This research will identify the impact of existing social and emotional learning paradigms, and identify unmet treatment needs in middle childhood.

The capacity to evaluate the impact of a program like *KMP* on mental health and related outcomes could, in principle, be extended to the evaluation of other public programs and social policy initiatives of relevance to child development and subsequent health and well-being.

Procedure

Figure 1 (below) illustrates the factors to be measured according to the age of the child cohort
for the two key components of (1) multigenerational inter-agency record linkage and (2) cross-sectional child online survey. A more detailed summary of these measures is also provided in the section below.

Figure 1. Stage 1 Research Variables
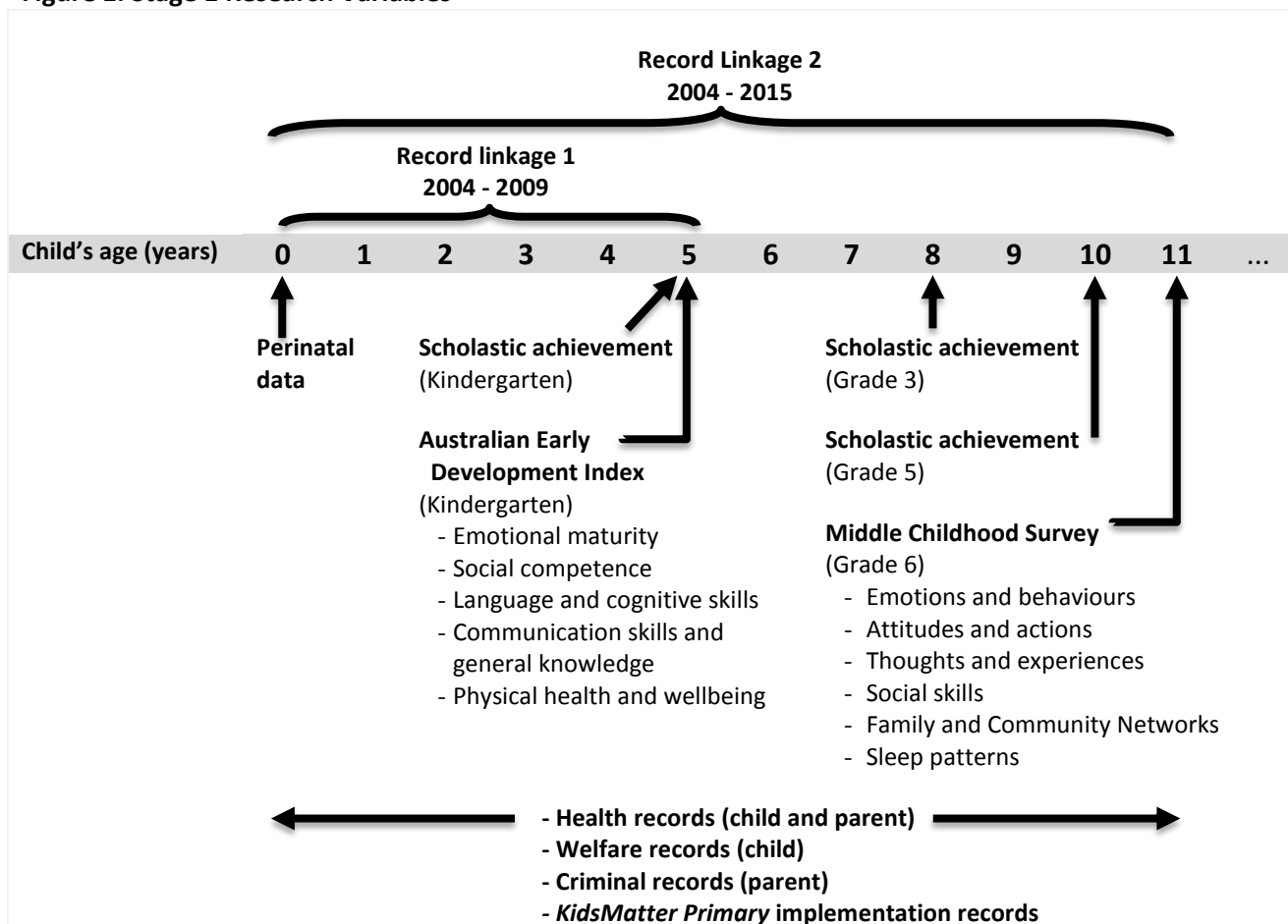
Record Linkage: Databases include:

Education Records

- **Australian Early Development Index** (Commonwealth Department of Education, Employment, & Workplace Relations): *Measures of social, emotional, behavioural, cognitive, and physical functioning at school entry*;
- **Best Start Kindergarten Assessment** (NSW Department of Education and Communities): *Measures of literacy and numeracy skills at school entry*;
- **National Assessment Program Grades 3 and 5** (NSW Department of Education and Communities): *Measures of standardised literacy and numeracy ability*;

Health Records

- **Perinatal (Midwives) Data Collection** (NSW Ministry of Health): *Measures of birth factors and obstetric complications;*
- **Registry of Births, Deaths, and Marriages - Births and Deaths** (Australian Bureau of Statistics): *Births: used to enable multigenerational record linkage; Deaths: Measure of death event and type;*
- **ABS Mortality Data Collection** (Australian Bureau of Statistics): *Death: Measure of death event and type;*
- **Emergency Department Data Collection** (NSW Ministry of Health): *Measures of health and psychiatric history;*
- **Admitted Patient Data Collection** (NSW Ministry of Health): *Measures of health and psychiatric history;*
- **Mental Health Ambulatory Data Collection** (NSW Ministry of Health): *Measures of health and psychiatric history;*

Welfare Records
- **Child Protection, Out of Home Care, and Brighter Futures Data Collections** (NSW Department of Family & Community Services): *Measures of involvement with child protection, nature of harm, and the presence of early intervention services*;

Crime Statistics
- **BOCSAR** (Bureau of Crime Statistics and Research): *parental criminal records*

School-based mental health promotion programme data
- **KidsMatter Primary**: *Measures of child mental health and well-being interventions;*

Middle Childhood Survey: Self-reports of child functioning at age 11 years will be obtained during the third school term of 2015, via online cross-sectional survey of NSW Grade 6 classes. Measures to be included in the survey (self-report) include:
- Emotions and behaviours
- Social skills
- Attitudes and actions
- Thoughts and experiences
- Sleep patterns
- Family and community networks