

# TEENAGE PREGNANCY

## Introduction

New Zealand's teenage pregnancy rates are high by international standards [235]. Further, in the Youth'07 Survey, a survey of 9,107 New Zealand secondary school students, 2,620 students reported having 'ever had' sexual intercourse. Of these 2,620 students, 11.6% reported that they had been pregnant, while 9.9% reported that they had caused a pregnancy. Foregoing health care was common amongst sexually experienced students (24.2%), with students with self-reported pregnancies reporting greater difficulty accessing healthcare (41.7% vs. 20.6%). Barriers to access included concerns about privacy, uncertainty as to how to access healthcare and a lack of transport [236].

Such findings are of concern, as in New Zealand teenage pregnancy has been shown to increase the risk of both preterm birth and small for gestational age [6]. Further, young maternal age is associated with an increased risk of neonatal and post-neonatal mortality and sudden unexpected death in infancy (SUDI) (see *Infant Mortality* section). There is currently debate, however, as to whether it is the social or biological factors that play the greatest role, with risk of preterm birth amongst teens disappearing in a number of studies, once the effects of socioeconomic disadvantage are taken into account [237].

In addition to its biological effects, teenage pregnancy may also influence social outcomes, with the Christchurch Health and Development Study, which followed a cohort of 515 women to age 25 years, finding that early motherhood (having a baby <21 years and not adopting it out) was associated with poorer mental health outcomes (depression, anxiety, suicidal ideation and suicide attempts), educational outcomes (the attainment of any qualifications, tertiary qualifications, or a university degree) and economic circumstances (welfare dependency, paid employment and family income). Risk of young motherhood, however, was in turn influenced by previous family circumstances (e.g. having parents without formal qualifications, low family living standards during childhood) and once these factors were taken into account, the associations between early motherhood and poorer mental health outcomes disappeared. Significant associations remained however between early motherhood and poorer educational outcomes and economic circumstances at age 25 [238]. Such findings potentially suggest that further effort is required, to ensure that all young mothers are able to realise their full educational potential and to create a secure economic base for themselves and their children.

The following section explores teenage birth rates using information from the Birth Registration Dataset. Policy documents and evidence-based reviews which consider how teenage mothers might better be supported are considered at the end of this section.

### Data Sources and Methods

#### Indicator

##### 1. Teenage Births: Live Births to Women Aged <20 Years

**Numerator:** Birth Registration Dataset: All live births to women aged <20 years

**Denominator:** Statistics NZ Estimated Resident Population: All women aged 15–19 years (with linear extrapolation being used to calculate denominators between Census years).

##### 2. Terminations of Pregnancy in Women <20 Years of Age

**Numerator:** Abortion Supervisory Committee via Statistics NZ: Induced abortions registered with the Abortion Supervisory Committee for women aged <20 years.

**Denominator:** Statistics NZ Estimated Resident Population: All women aged 15–19 years (with linear extrapolation being used to calculate denominators between Census years).

#### Notes on Interpretation

Note 1: In the analysis of total teenage pregnancy rates, miscarriage rates were estimated at 10% of induced abortions and 20% of live births [239].

Note 2: The teenage birth rates presented here may vary slightly from previous years, as the Ministry of Health no longer provides stillbirth data in the Birth Registration Dataset due to concerns about data quality. Thus the



current analysis is restricted to teenage live births (as compared to total teenage birth rates (including stillbirths) which were presented in previous years).

Note 3: **Appendix 4** provides an overview of the strengths and limitations of the Birth Registration Dataset.

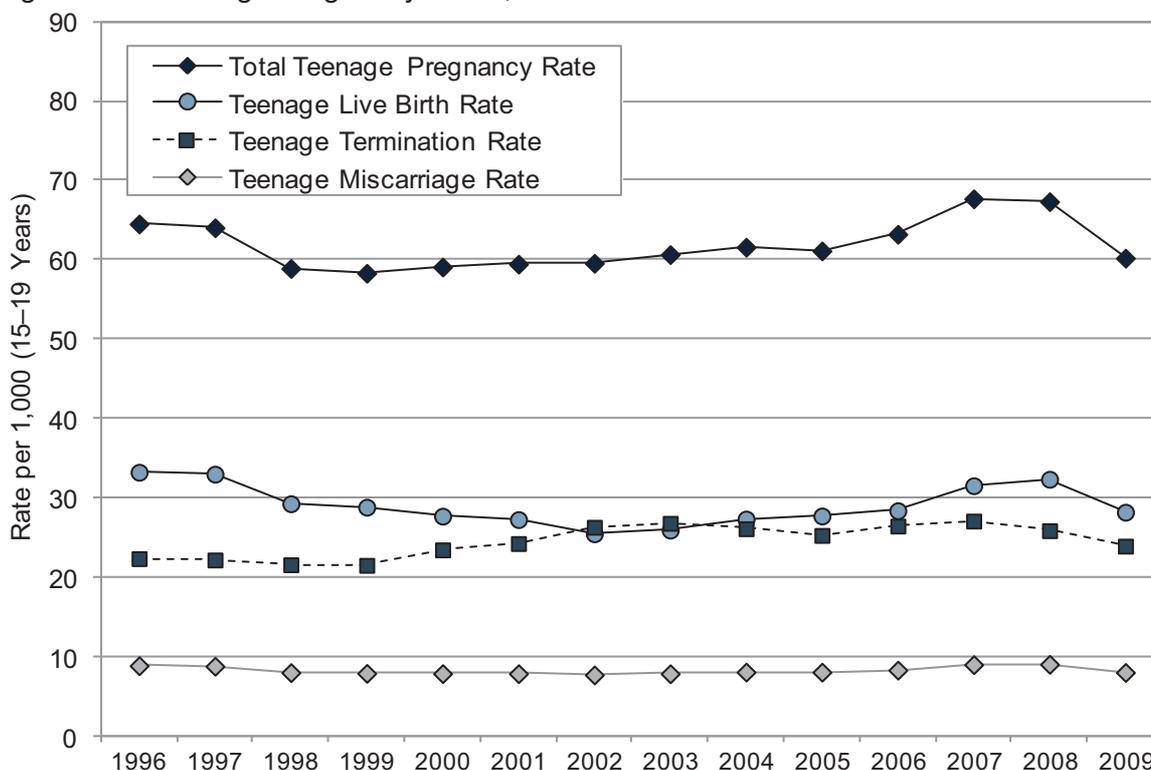
Note 4: 95% confidence intervals have been provided for the rate ratios in this section and where appropriate, the terms *significant* or not *significant* have been used to communicate the significance of the observed associations. Tests of statistical significance have not been applied to other data in this section, and thus (unless the terms *significant* or non-*significant* are specifically used) the associations described do not imply statistical significance or non-significance (see **Appendix 2** for further discussion of this issue).

## New Zealand Distribution and Trends

### New Zealand Trends

In New Zealand, teenage live births declined during the late 1990s and early 2000s, to reach their lowest point, at 25.5 per 1,000, in 2002. Birth rates then gradually increased again, reaching a peak of 32.4 per 1,000 in 2008. In contrast, teenage terminations of pregnancy increased during the late 1990s and early 2000s, reached a plateau between 2002 and 2007, and then declined. Teenage birth and termination rates were thus roughly equivalent during 2002–2004 (i.e. for every woman giving birth in her teenage years, there was one corresponding termination of pregnancy) (**Figure 140**).

Figure 140. Teenage Pregnancy Rates, New Zealand 1996–2009



Source: Numerators: Birth Registration Dataset (Live births only) and Statistics NZ; Denominator: Statistics NZ Estimated Resident Population. Note: Miscarriages were estimated at 10% of induced abortions and 20% of live births [239].

### New Zealand Distribution by Ethnicity and NZDep Decile

In New Zealand during 2006–2010, teenage live birth rates were *significantly* higher for Māori > Pacific > European > Asian/Indian women and those from average-to-more deprived (NZDep decile 2–10) areas (**Table 166**). Similar ethnic differences were seen during 2000–2010 (**Figure 141**).

## Total Birth Rates by Maternal Age and Ethnicity

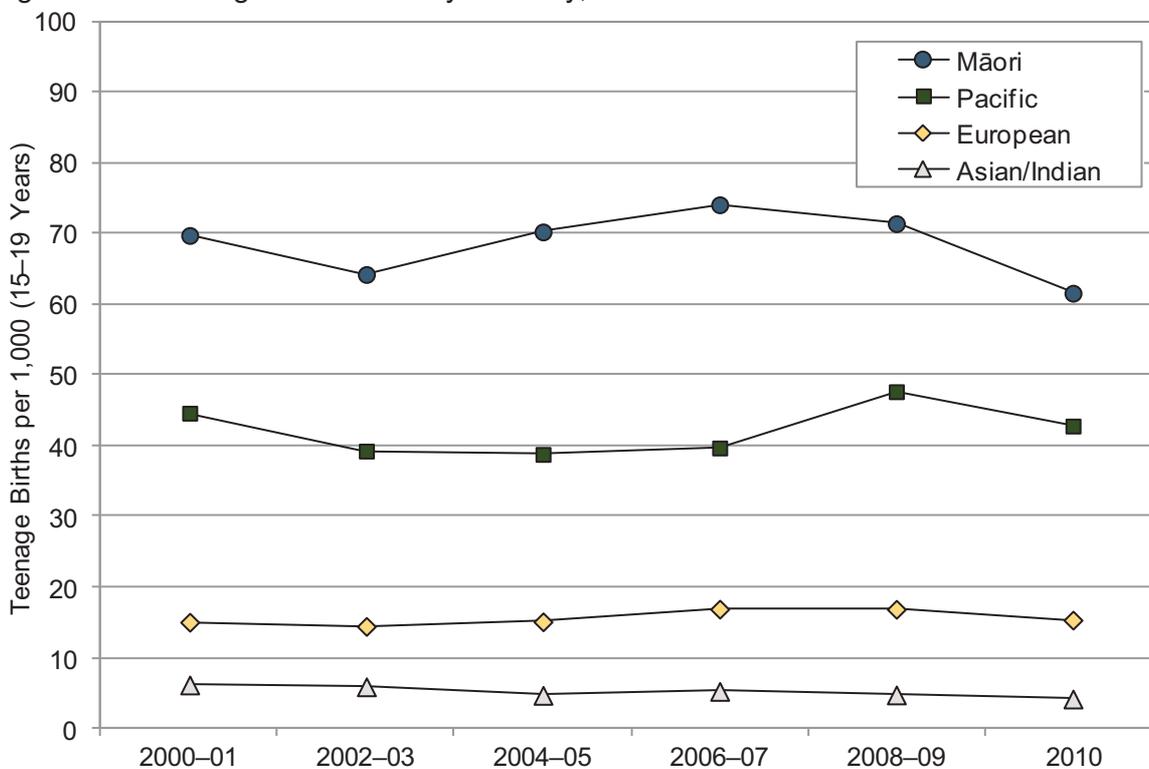
The higher teenage live birth rates for Māori and Pacific women outlined above however, must be seen in the context of the maternal age distribution (i.e. birth at a younger age), as well as the higher overall fertility rates (at all ages) for Māori and Pacific women (**Figure 142**).

Table 166. Teenage Birth Rates by Ethnicity and NZ Deprivation Index Decile, New Zealand 2006–2010

Variable	Rate	Rate Ratio	95% CI	Variable	Rate	Rate Ratio	95% CI
New Zealand							
Teenage Births							
NZ Deprivation Index Decile				NZ Deprivation Index Quintile			
Decile 1	8.45	1.00		Decile 1–2	9.57	1.00	
Decile 2	10.71	1.27	1.14–1.41	Decile 3–4	15.82	1.65	1.55–1.76
Decile 3	13.55	1.60	1.45–1.77	Decile 5–6	25.90	2.71	2.55–2.88
Decile 4	17.86	2.11	1.92–2.32	Decile 7–8	36.08	3.77	3.56–3.99
Decile 5	22.04	2.61	2.38–2.86	Decile 9–10	50.86	5.31	5.03–5.61
Decile 6	29.26	3.46	3.17–3.78	Prioritised Ethnicity			
Decile 7	35.28	4.17	3.83–4.55	European	16.55	1.00	
Decile 8	36.75	4.35	4.00–4.73	Māori	70.34	4.25	4.13–4.37
Decile 9	42.00	4.97	4.57–5.40	Pacific	43.60	2.63	2.53–2.74
Decile 10	59.90	7.09	6.53–7.68	Asian/Indian	4.82	0.29	0.26–0.32

Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Estimated Resident Population. Note: Rate is per 1,000, Ethnicity is Level 1 Prioritised; Decile is NZDep2001.

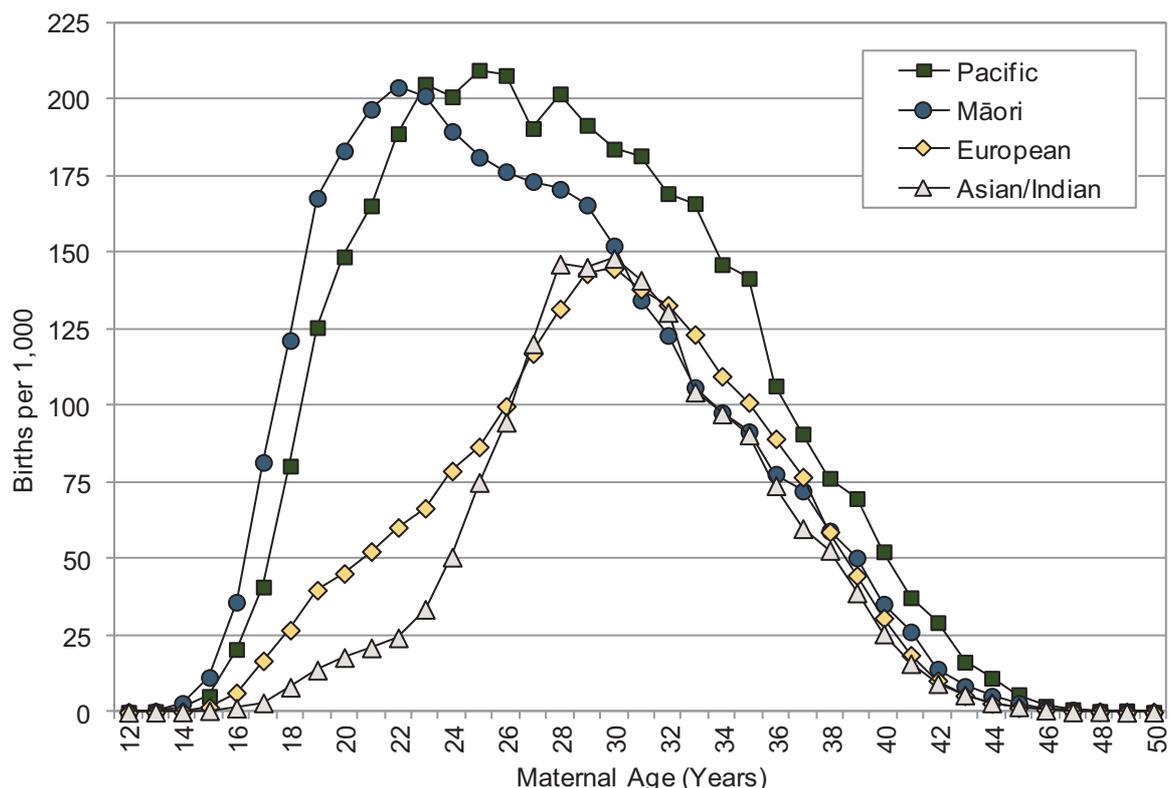
Figure 141. Teenage Birth Rates by Ethnicity, New Zealand 2000–2010



Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Estimated Resident Population. Note: Ethnicity is Level 1 Prioritised.



Figure 142. Live Birth Rates by Maternal Age and Ethnicity, New Zealand 2006–2010



Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Census Population Counts. Note: Ethnicity is Level 1 Prioritised.

## South Island Distribution and Trends

### South Island DHBs vs. New Zealand

In Southland during 2006–2010, teenage birth rates were *significantly* higher than the New Zealand rate, while in Nelson Marlborough, Canterbury, and Otago rates were *significantly* lower. Rates in the West Coast and South Canterbury were not significantly different from the New Zealand rate (**Table 167**).

Table 167. Teenage Birth Rates, South Island DHBs vs. New Zealand 2006–2010

DHB	Number: Total 2006–2010	Number: Annual Average	Rate per 1,000	Rate Ratio	95% CI
<b>Teenage Births</b>					
Nelson Marlborough	530	106.0	23.9	0.81	0.75–0.88
West Coast	157	31.4	30.3	1.03	0.88–1.20
Canterbury	1,827	365.4	21.0	0.71	0.68–0.75
South Canterbury	256	51.2	26.7	0.91	0.80–1.02
Otago	523	104.6	13.1	0.44	0.41–0.48
Southland	608	121.6	35.2	1.19	1.10–1.29
New Zealand	23,775	4,755.0	29.5	1.00	

Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Estimated Resident Population

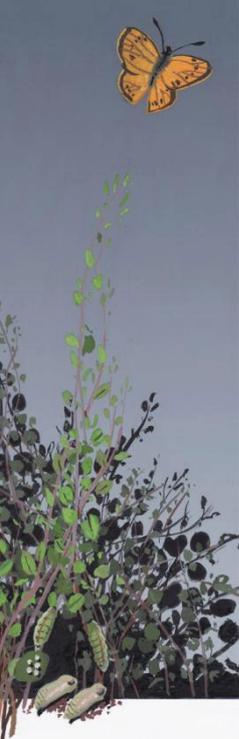
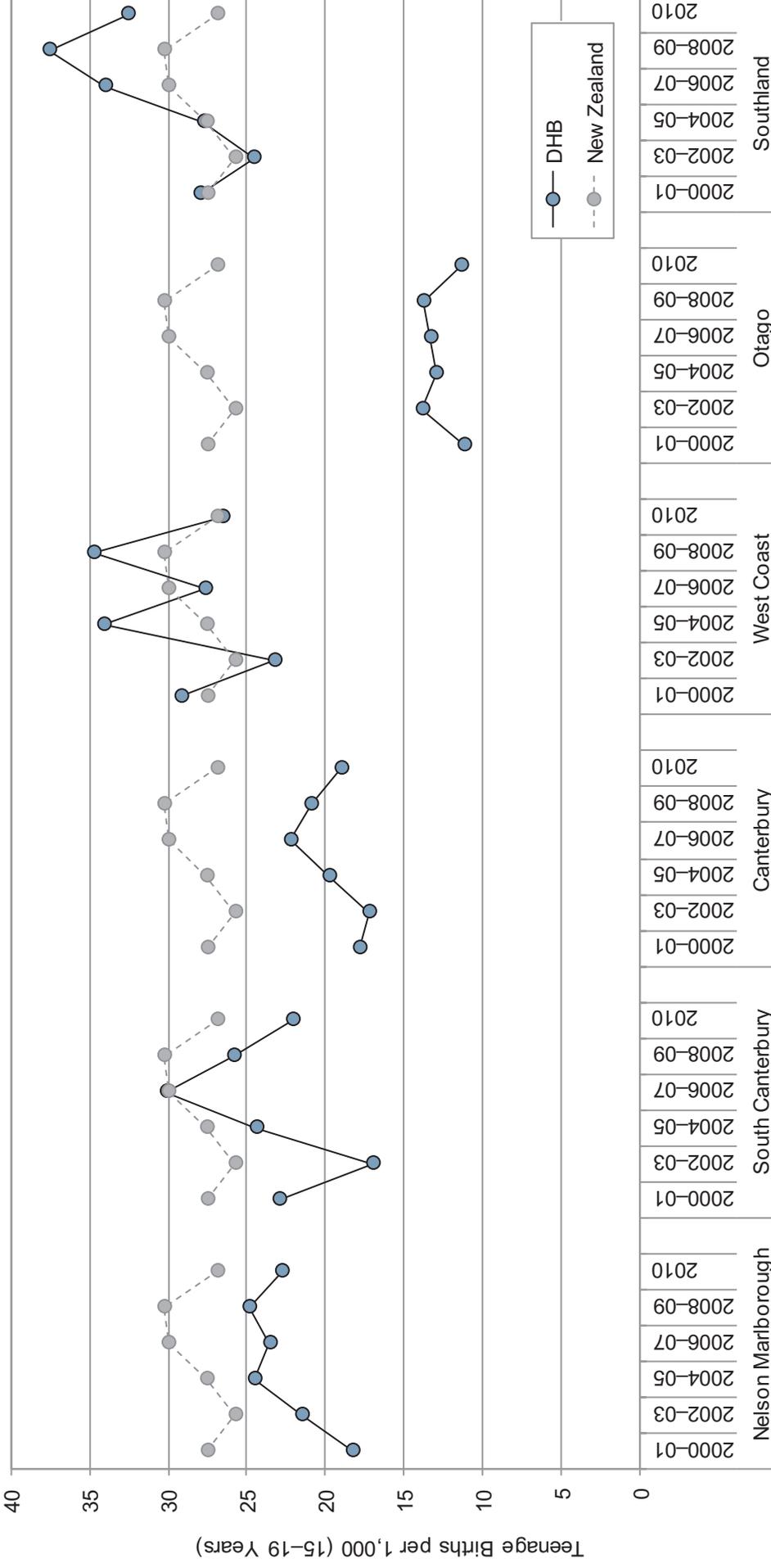
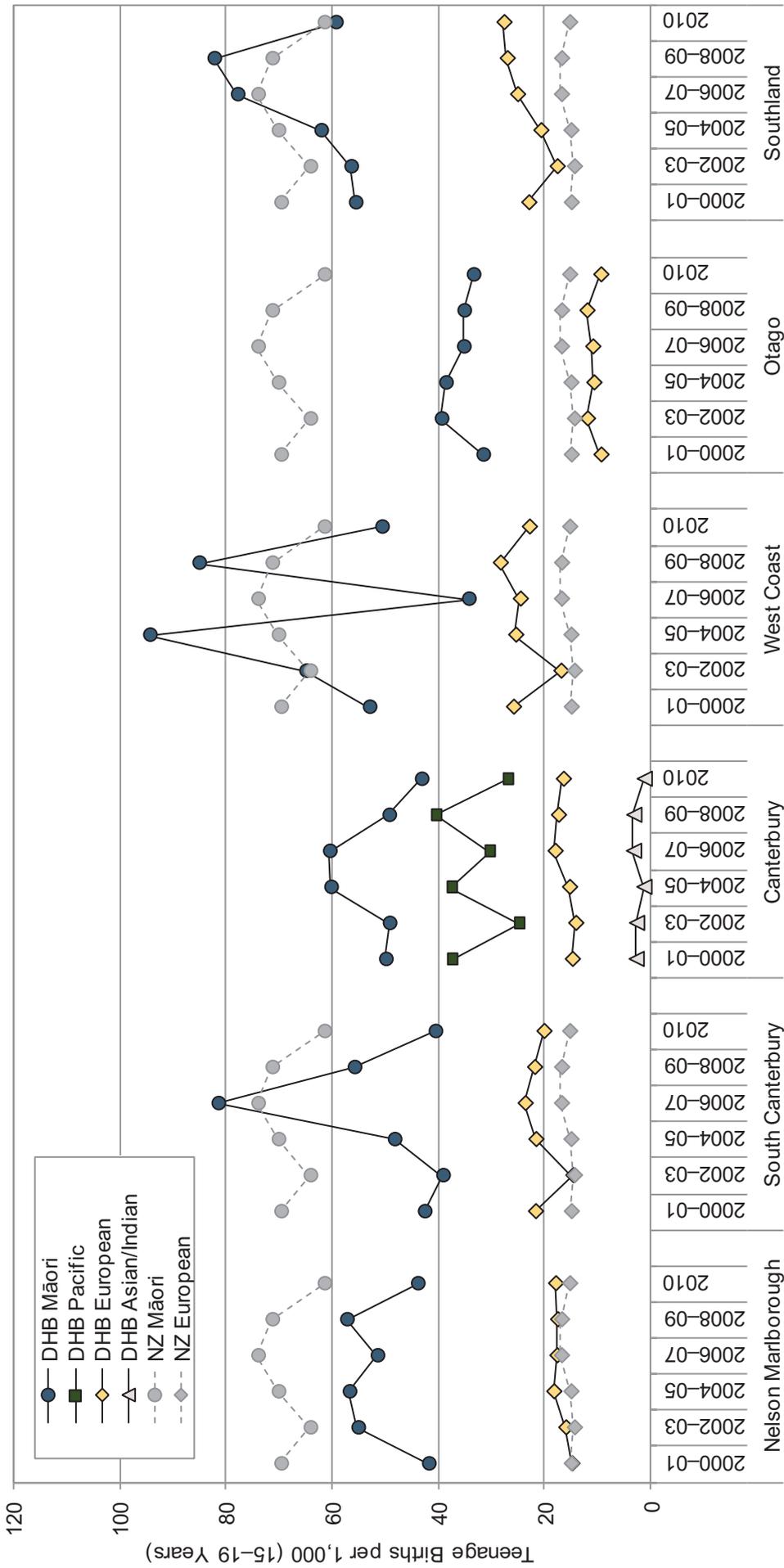


Figure 143. Teenage Birth Rates, South Island DHBs vs. New Zealand 2000–2010



Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Estimated Resident Population

Figure 144. Teenage Birth Rates by Ethnicity, South Island DHBs vs. New Zealand 2000–2010



Source: Numerator: Birth Registration Dataset (Live births only); Denominator: Statistics NZ Estimated Resident Population. Note: Ethnicity is Level 1 Prioritised.

## South Island Trends

In Nelson Marlborough teenage birth rates increased during the early 2000s, but became static after 2004–05, while in Canterbury rates increased during the mid-2000s, reached a peak in 2006–07 and then declined. Rates in Southland increased during the mid-2000s, to reach a peak in 2008–09. In contrast, in Otago rates were relatively static, while in South Canterbury and the West Coast rates fluctuated during 2000–2010. (Figure 143).

## South Island Distribution by Ethnicity

In Canterbury during 2000–2010, teenage birth rates were higher for Māori > Pacific > European > Asian/Indian women, while in the remaining South Island DHBs, teenage birth rates were higher for Māori than for European women (Figure 144).

## Summary

In New Zealand, teenage live births declined during the late 1990s and early 2000s, to reach their lowest point in 2002. Birth rates then gradually increased again, reaching a peak of 32.4 per 1,000 in 2008. In contrast, teenage terminations increased during the late 1990s and early 2000s, reached a plateau during 2002–2007, and then declined, with teenage live birth and termination rates being roughly equivalent during 2002–2004.

During 2006–2010, teenage live birth rates were *significantly* higher for Māori > Pacific > European > Asian/Indian women and those from average-to-more deprived (NZDep decile 2–10) areas. Higher teenage birth rates for Māori and Pacific women however, must be seen in the context of higher overall fertility rates (at all ages) for Māori and Pacific women.

In Southland during 2006–2010, teenage birth rates were *significantly* higher than the New Zealand rate, while in Nelson Marlborough, Canterbury, and Otago rates were *significantly* lower. Rates in the West Coast and South Canterbury were not significantly different from the New Zealand rate. In Canterbury, teenage birth rates were higher for Māori > Pacific > European > Asian/Indian women, while in the remaining South Island DHBs, rates were higher for Māori than for European women.

## Local Policy Documents and Evidence-Based Reviews Relevant to the Support of Teenage Parents

In New Zealand a number of policy documents are relevant to the support of teenage parents and these are considered in **Table 168**, along with a range of guidelines and evidence-based reviews which consider these issues in the overseas context. In addition **Table 171** in the *Terminations of Pregnancy* section considers publications relevant to the prevention of unintentional teenage pregnancy.

Table 168. Local Policy Documents and Evidence-Based Reviews Relevant to the Support of Teenage Parents

Government Policy and Other Documents
<p>Ministry of Education. 2011. <b>Teen Parents Unit Policy</b>. <a href="http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/PolicyAndStrategy/SchoolingInNewZealand/TeenParentUnitsPolicy.aspx">http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/PolicyAndStrategy/SchoolingInNewZealand/TeenParentUnitsPolicy.aspx</a></p> <p>This web page sets out the policy for Teen Parents Units in schools. Additional more general information about Teen Parent Units can be found at: <a href="http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/PolicyAndStrategy/SchoolingInNewZealand/TeenParentUnitsFAQ.aspx">http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/PolicyAndStrategy/SchoolingInNewZealand/TeenParentUnitsFAQ.aspx</a></p>
<p>Family and Community Services. 2011. <b>Teen Parent Initiatives</b>. <a href="http://www.familyservices.govt.nz/working-with-us/programmes-services/early-intervention/teen-parent-initiatives.html#TeenParentIntensiveCaseWorkers1">http://www.familyservices.govt.nz/working-with-us/programmes-services/early-intervention/teen-parent-initiatives.html#TeenParentIntensiveCaseWorkers1</a></p> <p>This web page provides brief information about services for teen parents that are initiatives of the Ministry of Social Development's Family and Community Services.</p>



Ministry of Social Development. 2010. **Budget 2010 - Supporting teen parents.** <http://www.msd.govt.nz/about-msd-and-our-work/newsroom/factsheets/budget/2010/teenparents.html>

This web page outlines the Government's three initiatives aimed at supporting teen parents and their children: Teen parent intensive case workers and volunteer supporters, supported housing for teen parents and children and parenting support for teen fathers.

Family and Community Services. 2010. **Teenage Parent Intensive Case Worker Practice Guidelines** Wellington: Ministry of Social Development. <http://www.familyservices.govt.nz/documents/working-with-us/funding-and-contracting/service-guidelines/teenage-parent-intensive-case-worker-guidel.pdf>

These practice guidelines are a legal part of the Agreements with Providers for the delivery of the MSD's Teenage Parent Intensive Case Worker initiative (TPCWI). They are intended to assist stakeholders by providing:

- Detailed information about service delivery
- A resource tool to help stakeholders deliver the TPCWI consistently and in line with national goals
- A means for Family and Community Services and the MSD to improve responsiveness to feedback concerning changes to the service delivery component of the agreement

The practice guidelines should be seen as setting the minimum standard, from which each service provider can develop a service in line with their own philosophy and local need and culture.

Ministry of Social Development. 2010. **Supporting Teen Fathers: a resource for service providers.** Wellington: Ministry of Social Development. <http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/planning-strategy/teen-fathers/teen-fathers.pdf>

This publication was developed to support the delivery of services for teen fathers. It is organised in three parts: Part One discusses what is known about teen fathers in New Zealand, Part Two covers things to consider when working with teen fathers and Part Three contains profiles of five providers currently delivering services to teen fathers in New Zealand. All of the parts include discussion of insights gained from the New Zealand and international research literature and lists of resources for each section. There is also a very comprehensive list of references at the end.

#### International Guidelines

National Collaborating Centre for Women's and Children's Health. 2010. **Pregnancy and complex social factors. A model for service provision for pregnant women with complex social factors.** London (UK): National Institute for Health and Clinical Excellence (NICE). <http://www.nice.org.uk/nicemedia/live/13167/50861/50861.pdf>

These guidelines are based on a comprehensive review of the available evidence, and are complementary to the NICE guidance *Antenatal care: routine care for the healthy pregnant woman*. <http://guidance.nice.org.uk/CG62> Chapter 6 deals with service provision for young women under the age of 20. It outlines ways healthcare providers can encourage young women to use antenatal services (e.g. offering age-appropriate services, help with other social problems, transport to and from appointments, care in the community, and providing opportunities for the father to be involved). There are recommendations for service organisations including working in partnership with other agencies, providing antenatal care in a variety of settings (e.g. GP surgeries, children's centres and schools, offering antenatal education in peer groups at the same time and location as clinic appointments and providing a direct-line telephone number for a named midwife who provides the majority of antenatal care). There is also guidance on training for healthcare staff and providing suitable information to pregnant young women. The appendices of this publication which contain the evidence tables for the included studies and details of the excluded studies, can be downloaded from: <http://guidance.nice.org.uk/CG110/Guidance/Appendices>

Department for Children, Schools and Families (U.K.). 2007. **Teenage Parents Next Steps: Guidance for Local Authorities and Primary Care Trusts.** London: Department for Children, Schools and Families. [http://www.changeforchildren.co.uk/uploads/Teenage\\_Pregnancy\\_Next\\_Steps\\_For\\_LAs\\_And\\_PCTs.pdf](http://www.changeforchildren.co.uk/uploads/Teenage_Pregnancy_Next_Steps_For_LAs_And_PCTs.pdf)

This British publication discusses services for teen parents in the U.K. and sets out what needs to happen at both the local and National level so that all agencies work together to achieve the best outcomes for teenage parents.

#### Systematic and Other Reviews from the International Literature

Savio Beers LA, Hollo RE. 2009. **Approaching the adolescent-headed family: a review of teen parenting.** *Current Problems in Pediatric & Adolescent Health Care*, 39(9), 216-33.

This review notes that many of the same psychosocial, environmental, and educational factors that lead to teen pregnancy continue to play a role in the teens' ability to parent effectively. It explores the impact of, and factors influencing, the involvement of fathers, and also the effects of multigenerational relationships. It notes that successful interventions and programmes take various forms but they are usually comprehensive and multi-disciplinary and consider the development of both the parent and the child. It states that practitioners should understand the psychosocial, developmental, educational, and relationship issues that affect adolescent parenting.

Barlow J, Smailagic N, Bennett C, et al. 2011. **Individual and group based parenting programmes for improving psychosocial outcomes for teenage parents and their children.** Cochrane Database of Systematic Reviews, 2011(3), Art. No.: CD002964. DOI: 10.1002/14651858.CD002964.pub2.

This review evaluated the effectiveness of programmes for teenage parents in improving psychosocial outcomes for the parents and developmental outcomes in their children. It included eight RCTs with 513 participants. Across all the studies there were 47 different outcomes compared between intervention and control groups, and in 19 of these there were statistically significant differences, all in favour of the intervention group. The authors conducted nine meta-analyses, each of which used data from two studies (data from four different studies was used in the meta-analyses). Of the meta-analyses, four showed statistically significant findings in favour of the intervention. The outcomes improved by the interventions were: parent responsiveness to the child (standard mean difference (SMD) -0.91, 95% CI -1.52 to -0.30, P=0.04), infant responsiveness to mother at follow-up (SMD -0.65, 95% CI -1.25 to -0.06, p= 0.03); and an overall measure of parent-child interactions post-intervention (SMD -0.71, 95% CI -1.31 to -0.11, p = 0.02), and at follow-up (SMD -0.90, 95% CI -1.51 to -0.30, p = 0.004). The authors concluded that, due to variations in the study populations, the interventions and the measures used, there were limits to the conclusions that could be drawn however they considered that there was some evidence that parenting programmes may be effective in improving a number of aspects of parent-child interaction. They stated that more research is needed.

Harden A, Brunton G, Fletcher A, et al. 2006. **Young people, pregnancy and social exclusion: A systematic synthesis of research evidence to identify effective, appropriate and promising approaches for prevention and support.** London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

<http://eppi.ioe.ac.uk/EPPIWebContent/hp/reports/TPPR/TPPR%20final.pdf>

This report presents the findings from a systematic review of the literature relating to teenage pregnancy, parenthood and social exclusion, particularly research relating to policy initiatives. It included 38 studies in the in-depth review of parenting support, 18 on interventions and 20 on young people's views. Ten of the intervention studies provided sound evidence for the value of particular interventions: two looking at welfare sanctions or bonuses, four looking at the effects of educational and career development programmes, three examining holistic, multi-agency support, and one on the effects of day-care. A meta-analysis using a random effects model suggested that educational and career development interventions were associated with a 213% increase in the number of young parents in education or training in the short term (RR 3.13, 95% CI 1.49 - 6.56). Welfare sanction/bonuses programmes and day-care also had positive short term effects. None of these interventions had any long term effects. The authors concluded that the provision of day-care appears to be the most promising approach for the prevention of repeat pregnancy. The qualitative research included in the review highlighted the diversity of needs and preferences among teen parents, the struggles against negative stereotypes, the heavy reliance on family support, the continuation of problems that existed before parenthood, and the wider costs and benefits of education and employment.

Letourneau NL, Stewart MJ, Barnfather AK. 2004. **Adolescent mothers: support needs, resources, and support-education interventions.** Journal of Adolescent Health, 35(6), 509-25.

This review by Canadian authors describes the challenges faced by adolescent parents and their children, their support needs, and the supports available and accessed by these parents. It also reviews existing support-education intervention studies published before 2003, which frequently suffered from small sample sizes, attrition, lack of suitable comparison groups and measurement inconsistencies. Categories of support-education interventions reviewed included social support, contraceptive knowledge and behaviour, employability, parental confidence and psychosocial wellbeing, parenting skills and knowledge and child health and development. Important considerations in planning support interventions include content, duration, intensity, mode, level, intervention agents and targets.

American Academy of Pediatrics. Committee on Adolescence and Committee on Early Childhood, Adoption, and Dependent Care. 2001. **American Academy of Pediatrics: Care of adolescent parents and their children.** Pediatrics, 107(2), 429-34.

This review discusses the medical and psychological risks specific to adolescent parents and their children and also particular challenges, mitigating circumstances and protective factors for the adolescent mother and her partner. It also includes suggestions for paediatricians on models for intervention and care. It notes that there are a number of factors associated with improved outcomes: having completed school before becoming pregnant, active participation in a programme for pregnant adolescents, staying in school and not having another pregnancy at 26 months post-partum, having a sense of control over one's life, not being socially isolated, and having only one or two more children after adolescent pregnancy. Family support is important but if the grandmother is too helpful this can increase the likelihood of a repeat pregnancy. Quality child care is needed so mothers can stay in school. The review concludes with a list of twelve recommendations for paediatricians.

Akinbami LJ, Cheng TL, Kornfeld D. 2001. **A review of teen-tot programs: comprehensive clinical care for young parents and their children.** Adolescence, 36(142), 381-93.

This paper reviewed four published evaluations of teen-tot programmes. Studies were included if they described a programme including clinical health supervision, family planning and support for teenage parents (e.g. assistance with staying in school or obtaining community services). Each of the included studies had multidimensional interventions (e.g. well-child health visits; 24-hour on call system to an interdisciplinary team; individual counselling about financial management, school and work; and social worker review of family planning methods with referrals to a birth control clinic). While there was limited evidence upon which to judge the effectiveness of teen-tot programmes, the authors concluded teen-tot programmes had moderate success in preventing repeat pregnancies, helping teenage mothers continue their education, and improving parent and infant health over 6 to 18 months. It was acknowledged that study weaknesses may have impacted on the observed effectiveness.

### Useful Websites and Other Publications

Barbara C. 2010. **Resilience in teenage mothers: A follow-up study.** Wellington: Ministry of Social Development. <http://www.msdc.govt.nz/documents/about-msdc-and-our-work/publications-resources/research/sole-parenting/resilience-in-teenage-mothers.pdf>

This is the report of a study which involved interviewing, in 2008, thirteen of the original eighteen teenage mothers who participated in a 2001 study on young women's views and experiences of teenage motherhood. It includes a literature review which is organised under a number of headings: risks associated with teenage motherhood, resilience research, and new perspectives on resilience and teenage mothers. The author concluded that "where policies and programmes help teenage mothers to develop their skills and competencies, provide social support, and encourage further education and suitable employment, resilience can be enhanced. Such an approach helps them to feel strengthened, rather than diminished, by teenage motherhood."

Boden JM, Fergusson DM, John Horwood L. 2008. **Early motherhood and subsequent life outcomes.** Journal of Child Psychology & Psychiatry & Allied Disciplines, 49(2), 151-60.

This paper reports on data obtained as part of the Christchurch Health and Development Study which has followed a cohort of New Zealand children for over 25 years. Early motherhood was found to be associated with higher levels of mental health disorders, lower levels of educational achievement, higher levels of welfare dependence, lower levels of workforce participation, and lower income. After controlling for confounding factors the association between early motherhood and later mental health disorders was no longer statistically significant, but the association with later educational achievement and economic circumstances persisted. The authors concluded that early motherhood increases a mother's risk for educational underachievement and poor economic circumstances, but that links between early motherhood and later mental health difficulties can be largely explained by childhood, family and related circumstances that occurred before parenthood.

Loxton D, Stewart Williams J, Adamson L. 2007. **Barriers to Service Delivery for Young Pregnant Women and Mothers.** Canberra: The National Youth Affairs Research Scheme (NYARS). [http://www.deewr.gov.au/Youth/Programs/NYARS/Documents/ServiceDeliveryBarriers\\_Report.pdf](http://www.deewr.gov.au/Youth/Programs/NYARS/Documents/ServiceDeliveryBarriers_Report.pdf)

This is the report of a project which aimed to:

1. Identify the covert and overt structures that exist within services that operate to prevent young women from accessing those services
2. Identify the attitudes and beliefs that are perceived by young women to exist within services, policy, and the community and media, that deter them from accessing services
3. Identify and describe the experiences that young women have had when accessing services
4. Determine the barriers that service personnel perceive as acting to prevent young women from using their services
5. Determine any specific barriers to service use that occur for women from subgroups nominated by NYARS (the subgroups included those who: have experienced or are at risk of substance abuse; have been in foster care; have a disability; come from diverse cultural/linguistic backgrounds; are of Indigenous descent)
6. Describe models of best practice based on young women's experiences, and findings from the current literature.

The authors concluded that the most striking aspect of successful service delivery was a trusting relationship between the young woman and her service providers. The report provides a list of recommendations based on the research.

Johnson R, Denny S J. 2007. **The Health and Wellbeing of Secondary School Students attending Teen Parent Units in New Zealand.** Auckland: The University of Auckland. <http://www.youth2000.ac.nz/publications/reports-1142.htm>

This report describes the results of an anonymous survey of 220 teenage parents attending Teen parent Units in New Zealand. The survey focused on issues related to the health and wellbeing of these students. It was found that most teenage parents attending these units were well connected to their families and felt supported within the Teen Parent Units but it also identified a number of areas of concern including issues around sexual health, nutrition and physical activity, and mental health. The authors hope that the report will provide information for funders, planners, providers and schools that will help improve the health and wellbeing of teen mothers and their children.

Sawtell M, Wiggins M, Austerberry H, et al. 2005. **Reaching out to pregnant teenagers and teenage parents: Innovative practice from the Sure Start Plus pilot programmes.** London: Social Science Research Unit, Institute of Education, University of London. [http://www.leavingcare.org/downloads/standards\\_links/Reaching%20out%20to%20pregnant%20teenagers%20-%20Surestart%20innovative%20practice.pdf](http://www.leavingcare.org/downloads/standards_links/Reaching%20out%20to%20pregnant%20teenagers%20-%20Surestart%20innovative%20practice.pdf)

This guide aims to provide information and inspiration to those working to develop services for teenagers who are pregnant or who are parents. It is intended for those involved in commissioning services and for practitioners. Sure Start Plus was a pilot initiative that aimed to reduce the risk of long term social exclusion resulting from teenage pregnancy through co-ordinated support to pregnant teenagers aged <18 years and teenage parents. Its core aspect was the provision of one-to-one support through an advisor who offered a holistic package of care.

Berrington A, Diamond I, Ingham R, et al. 2005. **Consequences of Teenage Parenthood: Pathways which minimise the long term negative impacts of teenage childbearing.** Southampton: University of Southampton.  
<https://www.education.gov.uk/publications/eOrderingDownload/RW52.pdf>

This project, which was done under a U.K. Department of Health contract, used data from two large longitudinal British cohort studies to explore aspects of teenage parenthood and its impact. The results confirmed the well-established relationship between teenage parenthood and social deprivation and the age at which cohort members' mothers had their first children. Mothers expressed aspirations for their daughters (or lack of them) were also influential. Teenage parenthood was found to be a key pathway for the intergenerational transmission of disadvantage. The authors state that the pattern of results suggests that important areas for action to prevent the adverse consequences of teenage parenthood are minimising workless families, improving housing and wider neighbourhood quality and encouraging the presence of a co-resident partner.

Jaffee S, Caspi A, Moffitt TE, et al. 2001. **Why are children born to teen mothers at risk for adverse outcomes in young adulthood? Results from a 20-year longitudinal study.** *Development & Psychopathology*, 13(2), 377-97.

This paper reports on data from the Dunedin Multidisciplinary Health and development Study which has been following a cohort of children born during 1972-1973. The aim of this study was to determine how much the effects of teen motherhood on offspring outcomes could be accounted for by social selection (i.e. the characteristics of the mother that make her more likely to have become a teen parent) vs. social influence (in which the consequences of being born to a teen parent cause harm to the child, apart from any characteristics of the mother herself). Across all outcomes, about 39% of the effect of teen parenthood on offspring outcomes was due to maternal characteristics and family circumstances together. In agreement with a social selection hypothesis, 18% of the effect of teen parenthood on offspring outcomes was accounted for by maternal characteristics and in agreement with a social-influence hypotheses, family circumstances accounted for 21% of the teen childbearing effect after controlling for maternal characteristics. The authors say that their results suggest that public policy initiatives should aim not only to delay childbearing in the population but also to support individual at-risk mothers and their children.