



# Introduction to the UK's longitudinal resources

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# Contents

- About CLOSER and its studies
- What is a longitudinal study?
- How does a longitudinal study work?
- What do the data cover?
- Advantages and disadvantages
- Findings
- Accessing the data
- Resources

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# About CLOSER

A longitudinal partnership



## Mission

CLOSER's mission is to maximise the use, value and impact of the UK's longitudinal studies, both at home and abroad.



# Funded by



# The studies

- MRC National Survey of Health and Development
- National Child Development Study
- 1970 British Cohort Study
- Millennium Cohort Study
- Avon Longitudinal Study of Parents and Children
- Southampton Women's Survey
- Hertfordshire Cohort Study
- Understanding Society

# Timeline of the studies



# Other partners



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UK Data Service

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# About longitudinal studies

What they are, how they work, why we need them



# What is a longitudinal study?

A longitudinal study is a prospective observational study that follows the same subjects repeatedly over a period of time.

The UK is home to the largest and longest-running portfolio in the world.

# Longitudinal vs cross-sectional

Cross-sectional	Longitudinal
One point in time	Several points in time
Different samples	Same sample
Snapshot of a given point in time, change at a societal level	Change at the individual level
Ex. British Social Attitudes Survey, Labour Force Survey	Ex. British Birth Cohort Studies, Understanding Society

# Types of UK longitudinal studies

## **Cohort studies**

- Following groups of individuals with specific temporal boundaries

## **Household panel surveys**

- Following households made up of groups of individuals

# What can longitudinal studies show us?






- how early life circumstances and experiences influence later outcomes
- how health, wealth, family, parenting, education, employment and social attitudes are linked
- how these aspects of life vary for different people.

# Data sources

- Study members
- Multiple age points
- Important people in the study members' lives
- Cognitive assessments, clinical assessments, biological samples, event histories, time diaries, qualitative data
- Linked data



# The 1958 British birth cohort

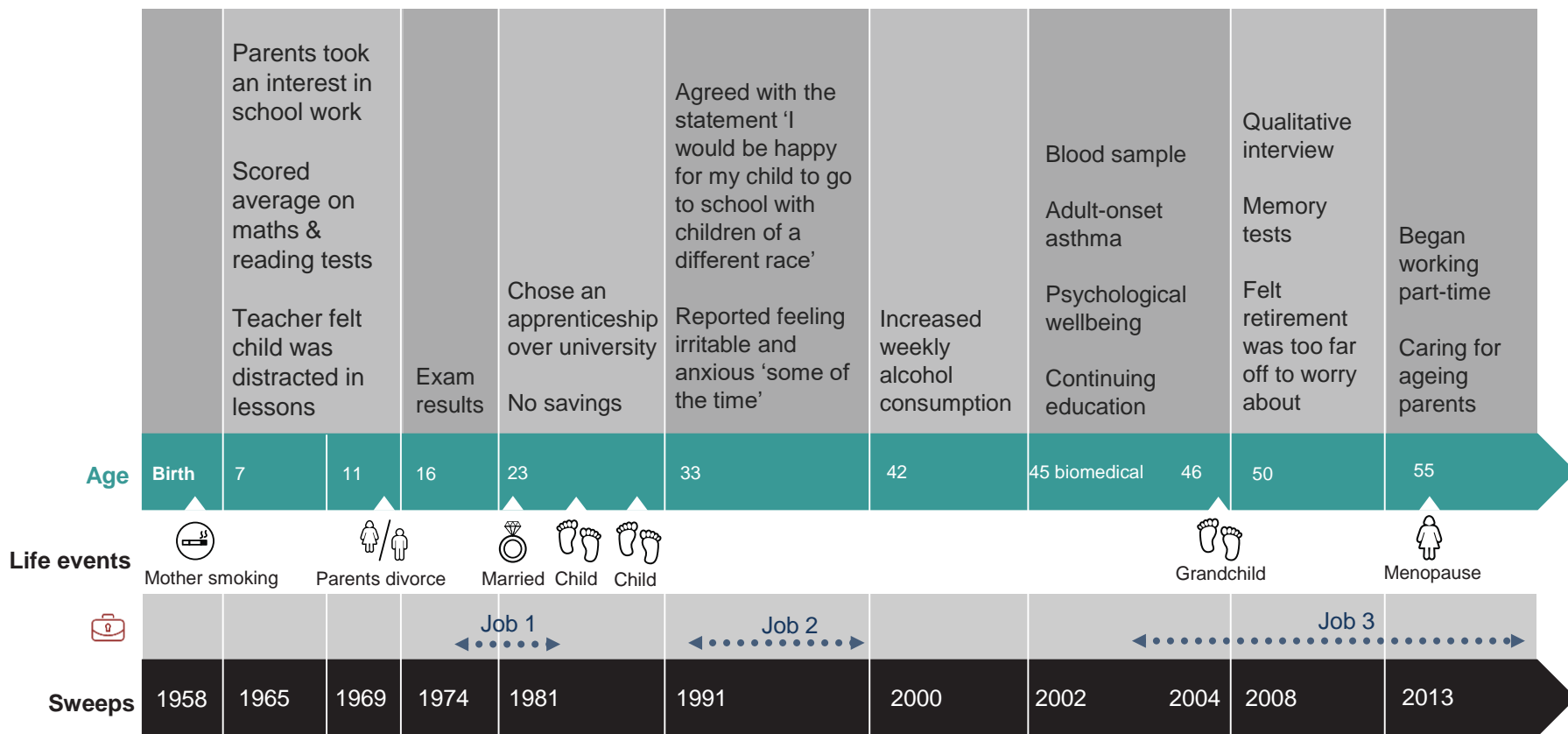
	1958 Birth	1965 7	1969 11	1974 16	1981 23	1991 33	2000 42	2004 46	2008 50	2013 55
 <b>main respondent</b>	mother	parents / cohort member	parents / cohort member	cohort member / parents	cohort member	cohort member	cohort member	cohort member	cohort member	cohort member
 <b>secondary respondent</b>	medical records	medical officer / school	medical officer / school	medical officer / school		partner children				
 <b>survey instruments</b>		cognitive assessments	cognitive assessments	cognitive assessments				Biomedical assessments	Qualitative interviews	
 <b>linked data</b>				CSE scores (1978)	Census area of residence data (1971 & 1981)					
 <b>response rate</b>	17,415	15,425	15,337	14,654	12,537	11,469	11,419	9,534	9,790	9,137



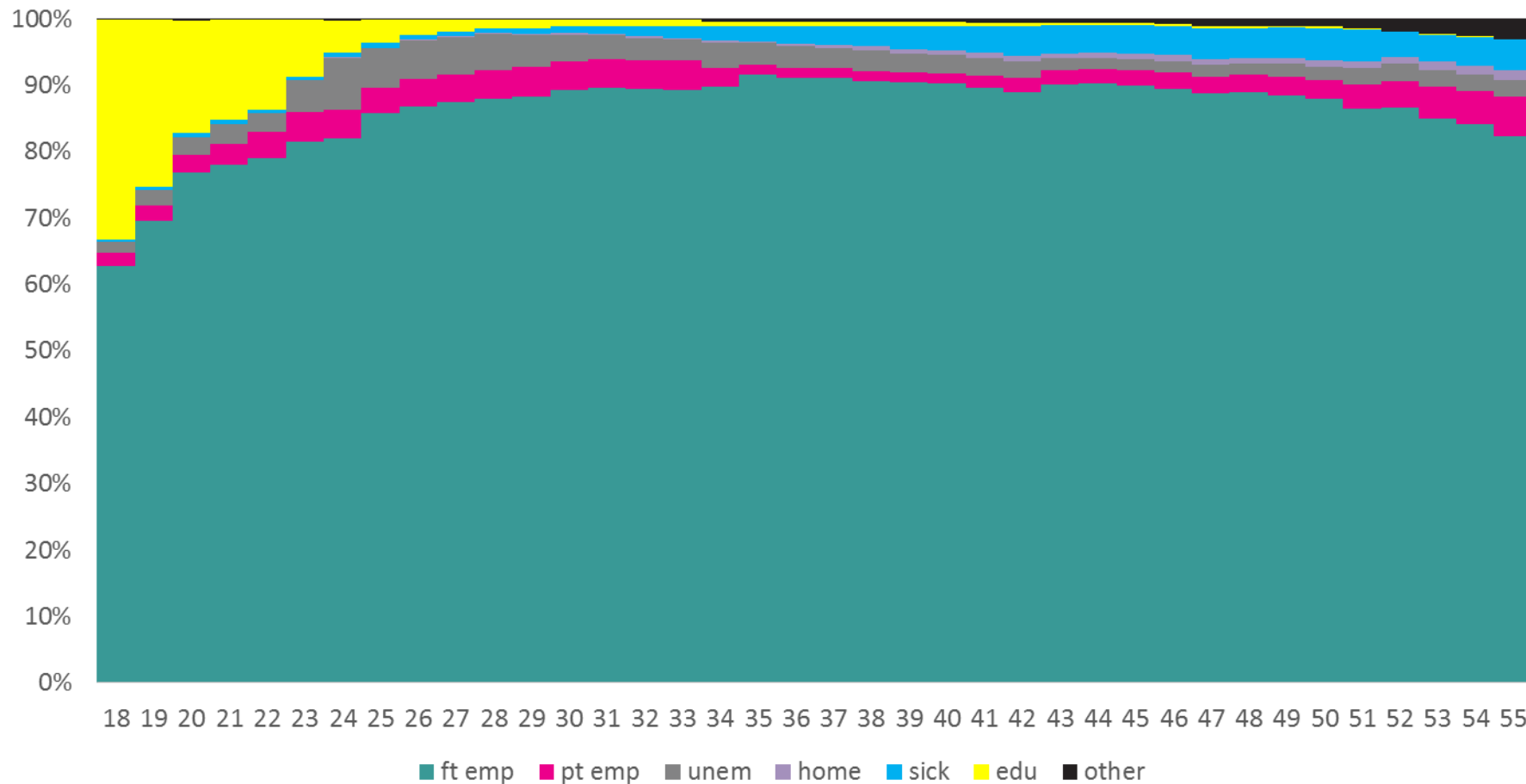
# Overview of genetic data

- All studies have genetic data or are currently genotyping/collecting samples
- Access arrangements differ by study
- Overview table will be made available via CLOSER Discovery

# Hypothetical life history

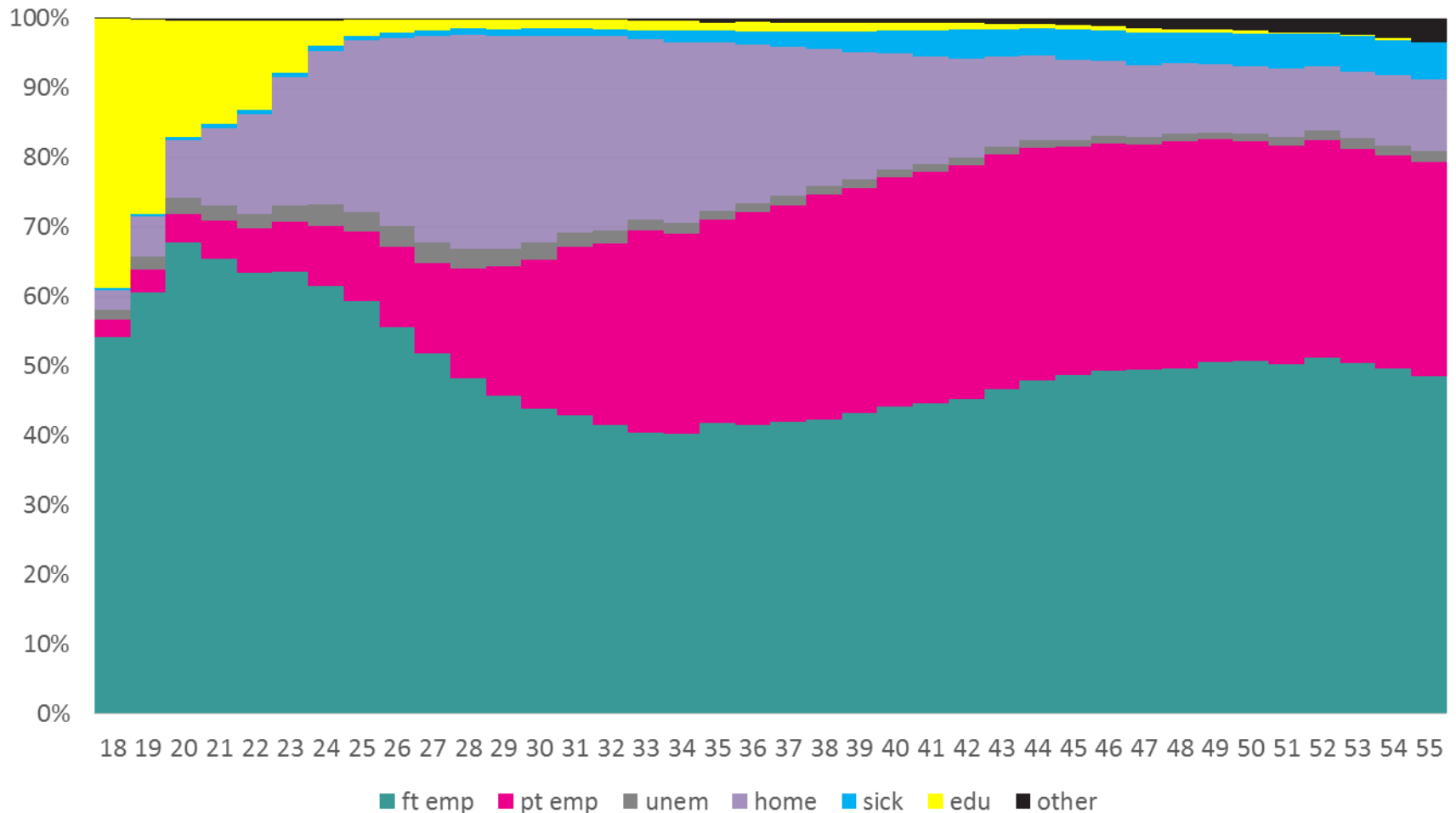


# 1958 men's work histories

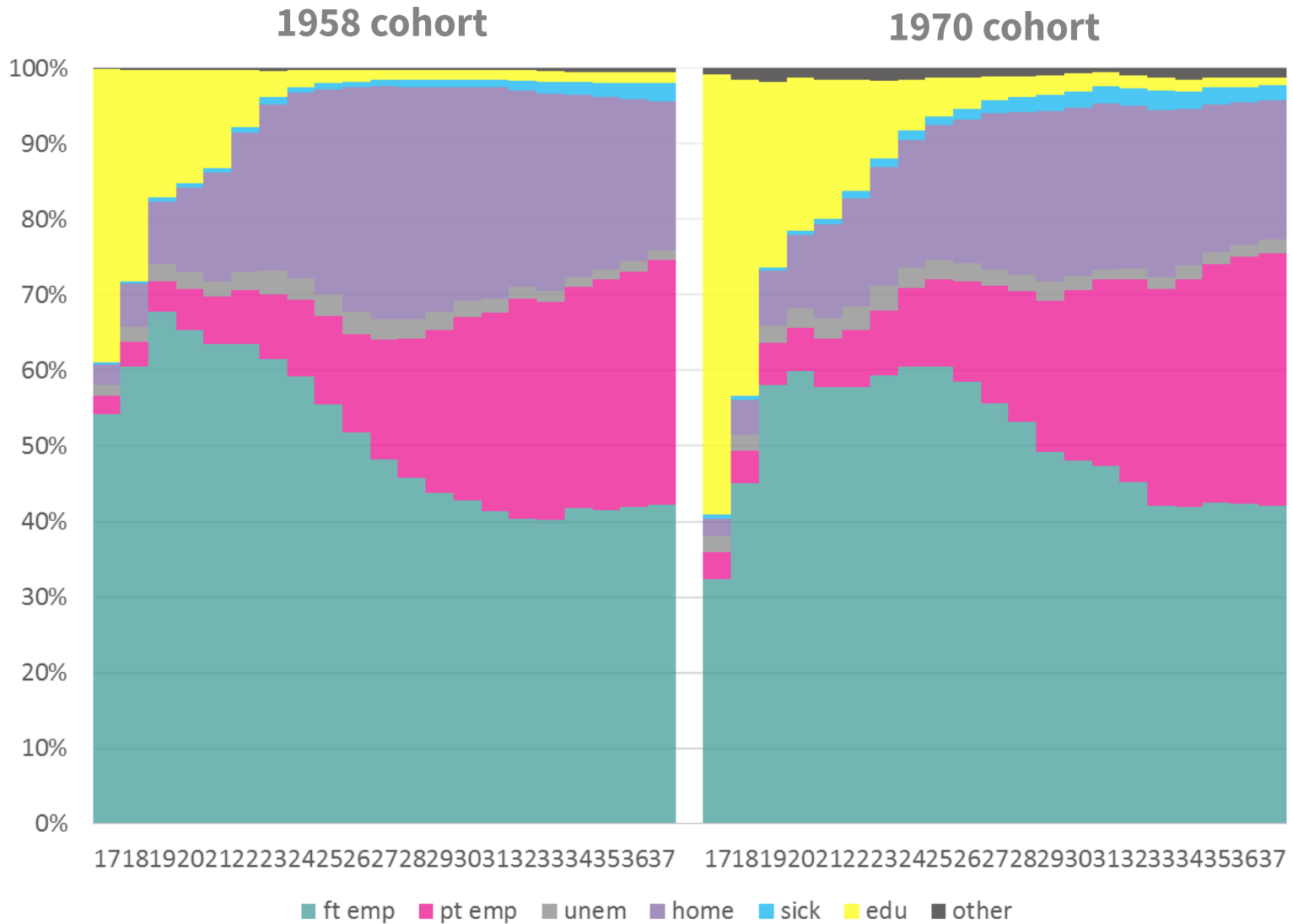




# 1958 women's work histories



# Women's work histories



# Advantages

- Better representation of social processes and individual experiences
- Rich array of information
- Getting closer to understanding causal effects
- Allow us to distinguish between age effects and cohort effects
- Allow us to investigate how time itself influences some processes and outcomes

# Disadvantages

- Attrition: samples shrink over time, and this is not always random
- Timeliness
- 'Complexity' of the datasets
- Comparing one cohort to another (challenges of harmonisation)

# Establishing causality

Longitudinal studies can help us get closer to establishing causality for two key reasons:

- **Temporal order** – longitudinal studies help us determine the order in which events/experiences/changes occur
- **Controlling for related factors** – longitudinal studies allow us to control for a wide range of potential related factors, which can help us understand mechanisms and processes

But establishing causality is still tricky, and there may always be things we can't fully control for.



# Questions?



# Findings

Quantitative and qualitative research

# Bullying



The **1958 cohort** has shown that adults who were bullied as children are more likely to experience mental health problems than those who were never bullied.

This includes suicidal thoughts, depression, anxiety disorders, and psychological distress.



# Bullying

The **Millennium Cohort Study** has shown that 7-year-olds with disabilities were twice as likely to be bullied as non-disabled children.

This was true even when taking into account other factors that put children at risk of bullying, such as poverty, cognitive ability, behaviour problems and height/weight.



# Bullying

**Understanding Society** has shown that more than half (54%) reported being involved with sibling bullying – either as a perpetrator or a victim.

Children who were bullied at home were more likely to have behavioural problems and to be unhappy. Those who were victims at home, were significantly more likely to be a victim at school as well.





A photograph of two elderly women walking away from the camera on a dirt path. The woman on the left is wearing a grey t-shirt and grey pants, carrying a white plastic bag and a bunch of green herbs. The woman on the right is wearing a light blue ribbed sweater and brown pants, using a wooden walking stick. A black shoulder bag is slung over the woman on the left. The background is a sun-dappled path with green foliage on the right.

# Physical capability

Among the 1946 cohort:

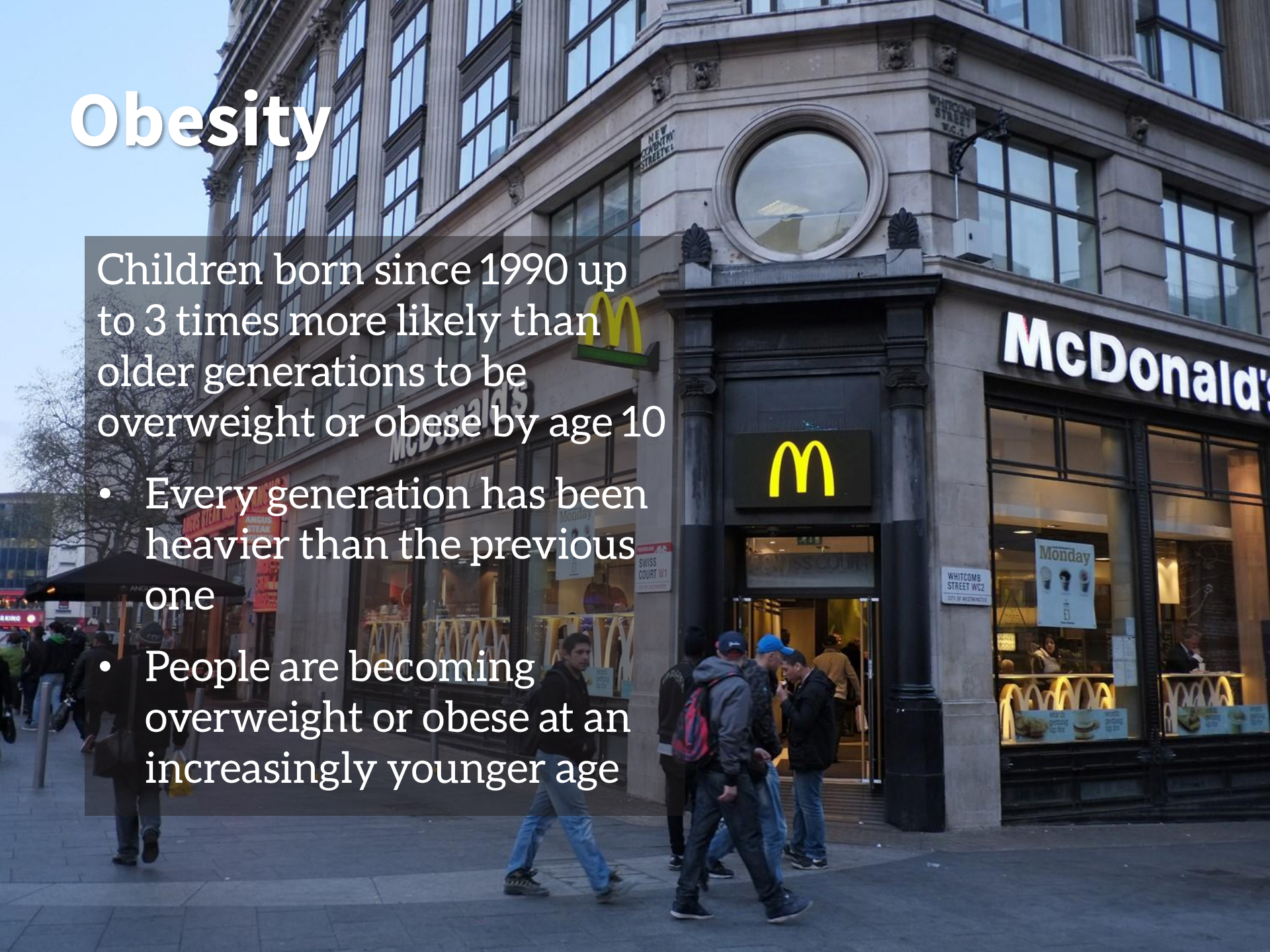
- age 43: 5% of women and 3% of men had problems walking due to a long-term health problem
- age 53: increased to 28% of women, 12% of men
- Negative effects of lower socioeconomic position affected women more than men



# Obesity

Children born since 1990 up to 3 times more likely than older generations to be overweight or obese by age 10

- Every generation has been heavier than the previous one
- People are becoming overweight or obese at an increasingly younger age





# Sally's story

- Home birth
- Grew up in a council house classed as overcrowded with no hot water
- Low income family
- Family had financial and housing 'difficulties'
- 5+ brothers and sisters
- Read regularly for pleasure
- Scored highly on reading test at age 7

# Sally's story

We was quite poor, seven children and Mum and Dad worked very hard, this house was always freezing cold ... we had a coal fire here and we always had food, so we had wonderful Christmases 'cause there was so many people here, the house was always full up and we had little presents and one year we had the five bob, I don't know if you know what five bob is, but we had a five bob Christmas, which was like 25 pence now, I suppose you'd call it. Yeah, we had things like colouring books and felt-tip pens and stuff like that, so we never went without.

# Sally's story

- Only just failed the 11-plus
- Left school at age 16 with few O-levels
- 2 jobs by age 23 and in the bottom tenth of the income distribution
- Spent an average of 4 hours per week caring for her ageing mother
- Worked in a local shop

# Sally's story

In 10 years time I'd like to think that I could afford to retire if I so desired. However given that I can't afford a pension I know that I will have to keep working. In some respects I feel this does me good. I have a reason to rise in the morning, I have the friendship, comradeship of other adults which is important to me. My present job, puts me in the heart of the local community and although it's not an important, well paid job, I love it. I'd like to still be doing it. I'd like the energy to still love my garden. I'd like to be married to my partner of 10 years (by then it would be 20 years). I'd still like to travel and see more of our wonderful world I've seen a vast amount so far!

# Questions?



# Accessing the data

How to apply to use the data for your own research

# UK Data Service

- ESRC-funded studies make their data available via the UK Data Service
- Available to any researcher to download
- License agreement (and special license for sensitive data)



# Applying to the study directly

- National Survey for Health and Development (1946 British birth cohort)
- Avon Longitudinal Study of Parents and Children
- Hertfordshire Cohort Study
- Southampton Women's Survey
- Requirements differ by study

# Questions?



# Resources

Where to get help



# Study resources

- Websites
- Bibliographies
- User guides to the datasets, questionnaires, and technical reports
- Online and in-person training on how to use the data for first-time users

# CLOSER resources

- Learning Hub
- Discovery search engine
- Contextual database
- Online evidence summaries (including briefing papers and reading lists)
- Training workshops, seminars and other events
- Harmonised datasets

# Thank you

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# The technical bit

Data harmonisation and data linkage

# Why is harmonisation important?

- Full potential of the UK studies is realised when we compare within and across studies
- Different studies have used different methods to collect information on participants' lives
- Data harmonisation involves recoding or modifying variables so that they are comparable



# CLOSER harmonised datasets

## Height, weight and BMI

- NSHD, NCDS, BCS70, ALSPAC, MCS
- Led by MRC Unit for Lifelong Health and Ageing

## Vision

- NSHD, NCDS, BCS70 (ALSPAC?)
- Led by UCL Institute of Child Health

# CLOSER harmonised datasets

## Socioeconomic status

- Social class: NSHD, NCDS, BCS70, ALSPAC, MCS, BHPS/UKHLS
- Income: NCDS, BCS70, MCS, ALSPAC, BHPS/UKHLS
- Led by the Institute for Fiscal Studies

# CLOSER harmonised datasets

## Childhood material and psychosocial adversity variables

- NSHD, NCDS, BCS70
- Led by MRC Unit for Lifelong Health and Ageing

## Overcrowding (housing)

- NSHD, NCDS, BCS70, MCS, BHPS/UKHLS
- Led by UCL International Centre for Lifecourse Studies

# Why is linking data important?

- Government departments routinely collect data on UK residents, which could significantly enhance study data
- UK studies are interested in linking to education records, health records, tax and benefit records, and measures of area deprivation

# What are the challenges?

- Every government department is different, with different hesitations
- Concerns raised include sensitivity of the data, staff capacity and cost
- However, consent to link data is generally quite high across the studies

# Overview of data linkage plans

		HCS	NSHD	NCDS	BCS70	ALSPAC	SWS	MCS	UKHLS	
Health	Registry	Established	Established	Established	Established	Established	Planned	Established	In development	
	Maternity records	Not planned	Not planned	Not planned	Not planned	Established	Not planned	In development	Not planned	
	Secondary care	Established	Planned	Not planned	Not planned	Established	Planned	Established	In development	
	Primary care	Planned	Planned	Not planned	Not planned	Established	Not planned	In development	Not planned	
	Prescriptions	Not planned	Planned	Not planned	Not planned	Established	Not planned	In development	Not planned	
	Social care	Not planned	Not planned	Not planned	Not planned	In development	Not planned	Not planned	Not planned	
	Community care	Not planned	Not planned	Not planned	Not planned	In development	Not planned	Not planned	Not planned	
Education	School	Not planned	Not planned	Not planned	Established	Established	Planned	Established	Established	
	FE/HE	Not planned	Not planned	Not planned	Not planned	Established	Not planned	Planned	Planned	
Employment	Employment	Not planned	Not planned	Planned	Planned	Planned	Not planned	Planned	Planned	
	Earnings	Not planned	Not planned	Planned	Planned	Planned	Not planned	Planned	Planned	
	Benefits	Not planned	Not planned	Planned	Planned	Planned	Not planned	Planned	Planned	
Criminality	Convictions/Cautions	Not planned	Not planned	Not planned	Not planned	In development	Not planned	Not planned	Not planned	
Spatial	Neighbourhood	Established	Established	Established	Established	Established	Established	Established	Established	
	Env. exposures	Not planned	Not planned	Not planned	Not planned	Established	Established	Not planned	Not planned	

Established

In development

Planned

Not planned

# Questions?



# Impact

Influencing policy and practice



# Types of stakeholders

Funders

Parliamentarians

Third sector

Government departments

# Types of stakeholders

Funders

Parliamentarians

Third sector

Government departments

Academic networks or collectives

Arms-length government bodies

Cross-government bodies,  
working groups and commissions

Devolved administrations

European government

Learned societies

Local government

Media

National Health Service

Parliamentary bodies

Political parties

Private consultancies

Private firms

Professional associations

Public service contractors

Regulators

Research institutions (not  
universities)

Service providers (all sectors)

Think tanks

Trade bodies and  
trade unions



**NICE** National Institute for Health and Care Excellence

**NHS**  
Stockport  
Clinical Commissioning Group

Monitor

 [www.parliament.uk](http://www.parliament.uk)

**DH** Department of Health

 Northern Ireland Executive  
[www.northernireland.gov.uk](http://www.northernireland.gov.uk)

 Care Quality Commission

IPPR

 Communities and Local Government

  
The Scottish Government

  
Public Health England

  
children's commissioner

DEMOS

  
Local Government Association

  
Department for Education

 **NUT**  
NATIONAL UNION OF TEACHERS

 BMA

 solace

THE COLLEGE OF  
**SOCIAL WORK**

 jobcentreplus

 **BERA**  
BRITISH EDUCATIONAL RESEARCH ASSOCIATION

 Royal College of Nursing  
The voice of nursing in the UK

 **UKRLP**  
UK Register of Learning Providers

 in

 You Tube



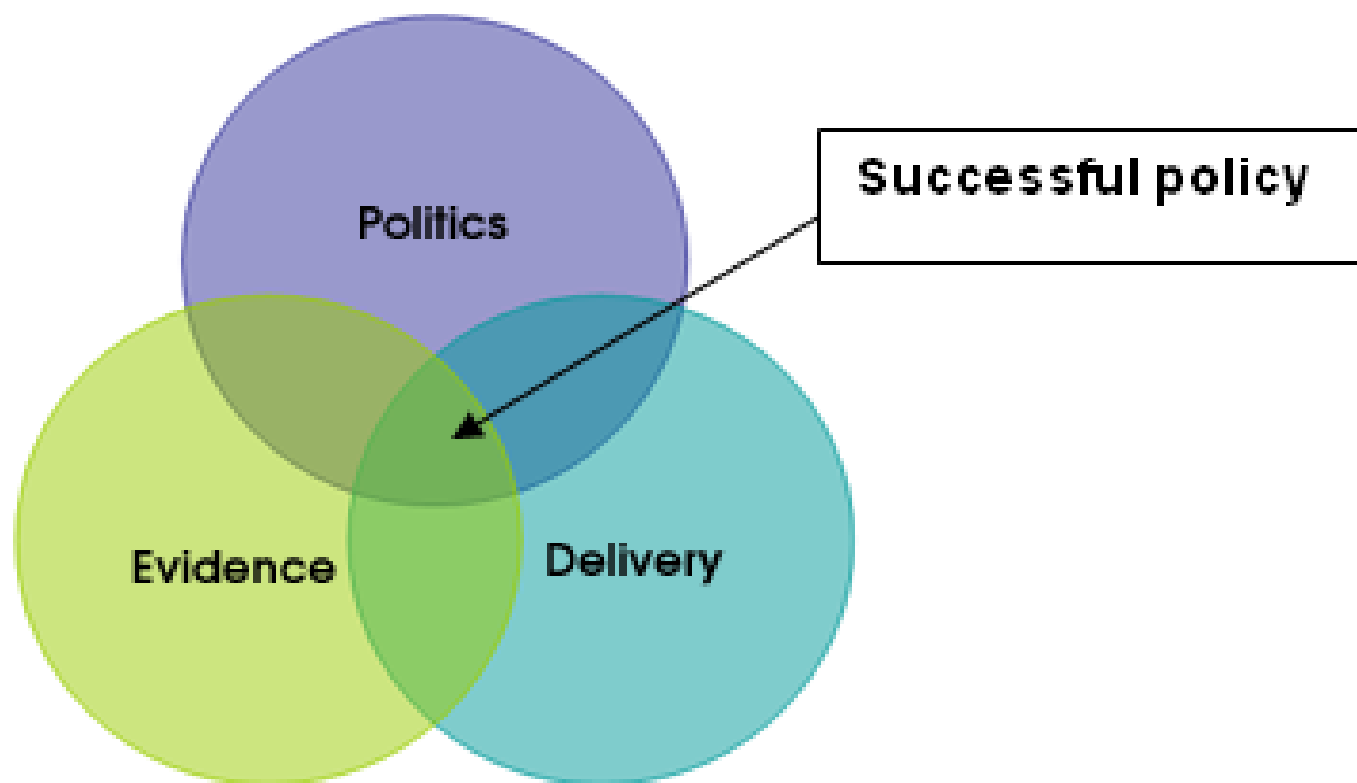
**Telegraph**

 **BBC NEWS**

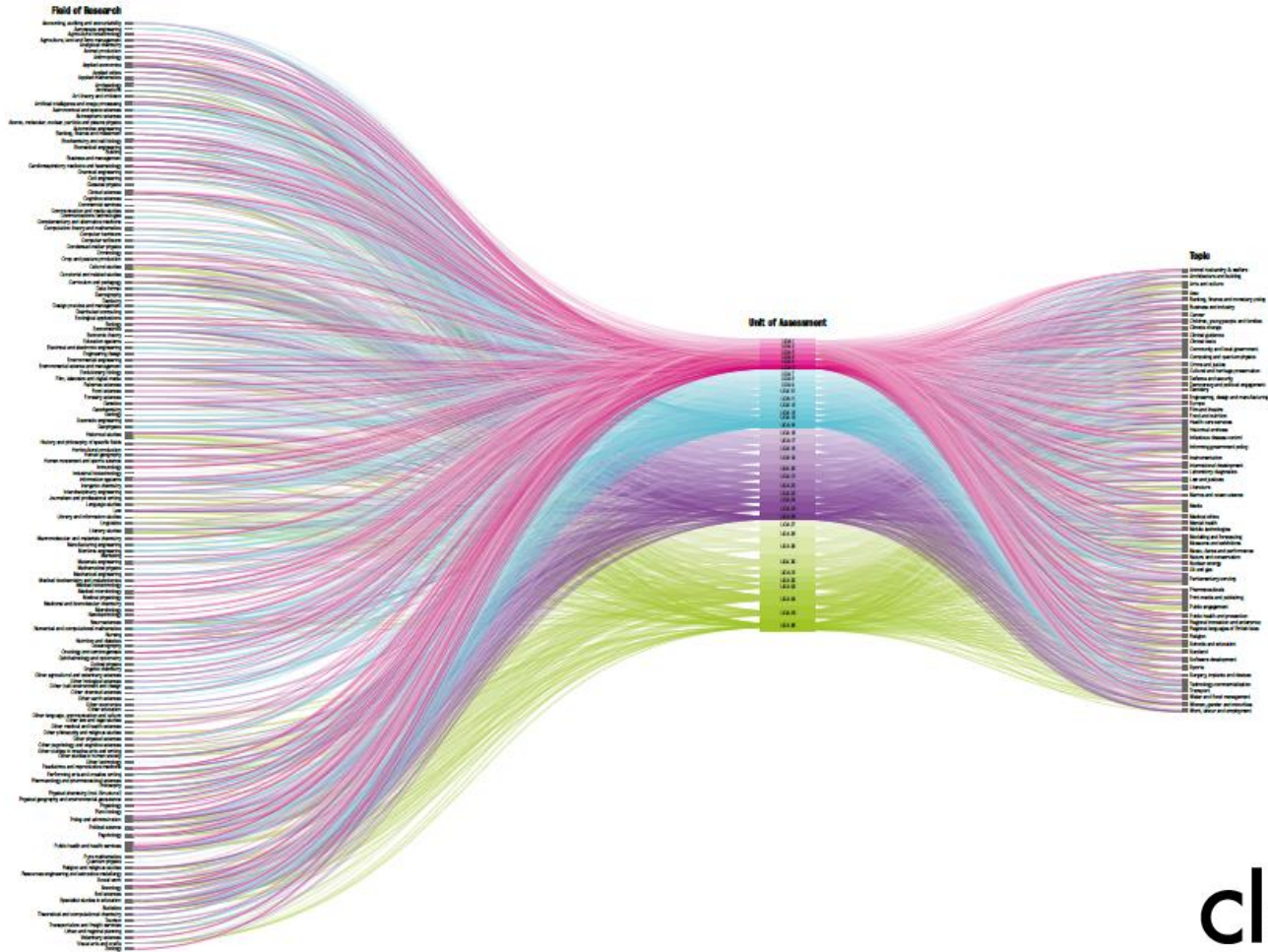
**theguardian**

**THE**  **TIMES**

# Role of research in policy



# Pathways to impact







# Impact case study

Poverty and children's cognitive development

# About the research

- Used MCS data from age 9 months to 7 years
- First systematic study of impact of persistent poverty on cognitive development
- Key findings:
  - 7-year-olds in poverty since birth perform substantially worse than those who were never poor
  - The combined direct and indirect effects of poverty outweigh impact of parenting

# Communication/dissemination

- Working paper: *Persistent poverty and children's cognitive development: Evidence from the MCS*
- Press coverage: Guardian, Telegraph, Nursery World, New Statesman
- 2,000+ pageviews, top 5 most downloaded
- Presentation at Parenting UK conference, alongside eminent policy figures



# Impact

- Evidence base for government *Measuring child poverty* consultation
- Consultation aimed to create 'multidimensional measure of child poverty'
- Research used to support income as one dimension of poverty, focusing in particular on long-term effects of income poverty

## Iain Duncan Smith and George Osborne clash over child poverty

Allies of Iain Duncan Smith claim that George Osborne's decision to block the Work and Pensions Secretary's bid to redefine child poverty was motivated by "personalities" rather than policy.



Iain Duncan Smith, the Work and Pensions Secretary, will publish a child poverty strategy that does not include a new formal definition as he had planned Photo: GETTY IMAGES

# Government to scrap child poverty target before tax credits cut

Iain Duncan Smith to remove measure that required eradication of child poverty by 2020 after publication of statistics reveals no fall in level



The government is to scrap its child poverty target and replace it with a new duty to report levels of educational attainment, worklessness and addiction, rather than relative material disadvantage, work and pensions secretary [Iain Duncan Smith](#) has said.

# Key learning

- Research competes with a wide range of other influences on policy
- Policymakers don't use evidence in full, and important findings or caveats can be lost
- Impact can come months, years or decades after the research is produced

# But...

- Ability to share interim findings is crucial to long-term research projects
- Securing impact can take a massive commitment of staff time – must be a shared and ongoing responsibility
- Mix formal and informal communications mechanisms for greatest effect