MANCHESTER 1824
The University of Manchester

ISSUE 3

SPRING 2010

CCSR News

The Cathie Marsh Centre for Census and Survey Research (CCSR)

Moving forwards

In April 2010 James Nazroo became the director of CCSR. James took up a chair in Sociology at The University of Manchester in 2006. His main research interests concern ethnicity, inequality, processes of stratification, and how these relate to health and well-being. Tarani Chadola also joined CCSR in April, moving from University College London, where he has worked extensively on health inequalities over the lifecourse, to a Chair in Medical Sociology.

From left to right, Ian Plewis, Tarani Chandola and James Nazroo

James' extensive research on ethnicity links very well with the research interests of many CCSR staff and his knowledge and involvement with some key UK longitudinal studies, for example the English Longitudinal Study of Ageing (ELSA), ties into our strategic aim of promoting methodological and substantive research with longitudinal data. Together, Tarani and James have long-standing shared research interests in life-course processes and longitudinal studies that fit centrally into the strategic aims of the discipline of social statistics, led by Ian Plewis, as well as those of CCSR.

For CCSR these appointments represent a major opportunity to build on existing strengths in social statistics and longitudinal studies whilst also consolidating and expanding our interests in ethnic inequalities by adding a new dimension of health and ageing.

People like us: the impact of ethnic concentration in diverse societies

On 16 April CCSR ran its fourth annual conference on research related to ethnicity and migration. The conference examined the origins and implications of ethnic concentration, or ethnic density. Themes for the day were: Migration, mobility and deprivation; Social capital and civic participation; Racism and tolerance; health and health inequalities. A full report will be included in the next newsletter. Overheads are available from the CCSR web-site.

in this issue...

Risk Scores in the Social Sciences

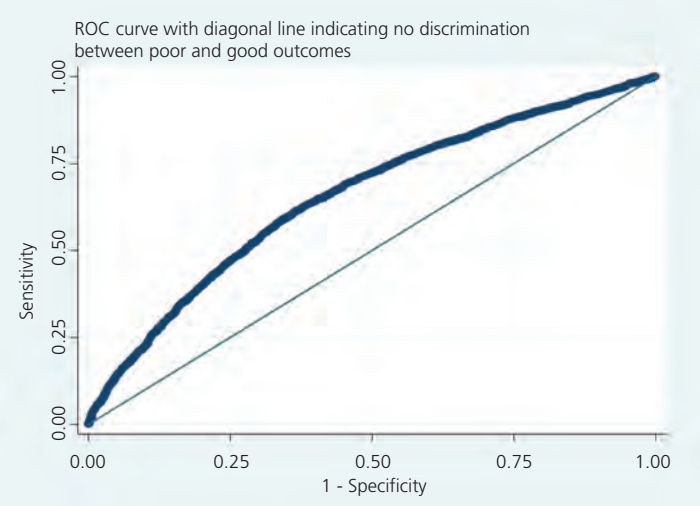
Ian Plewis

Social scientists are often interested in associations between explanatory variables measured at an earlier point in time and later outcomes. In some contexts, it is useful to divide these explanatory variables into risk and protective variables although the literature is often confused about the distinction between them.

An estimated model that relates a binary outcome to a set of predictors is known as a risk score. The main motivations for constructing risk scores are to classify and to predict and thus to aid decision making in conditions of uncertainty.

The thinking that lies behind the construction and use of risk scores might be applied more widely. A common approach, often found in developmental psychology for example, is to relate a set of childhood experiences and circumstances to psychopathological adolescent and adult outcomes. Researchers establish that some variables, conditional on the effects of others, are statistically significantly related to the outcome. This approach can be useful but, by concentrating on the estimates for particular predictors and some measure of model fit it is, at best, incomplete because we do not learn how well we can predict both the good and the poor outcomes, nor how we might use the risk score to target (or to discourage) future interventions.

A popular way of summarising the information about classification is to estimate a receiver operating characteristic (ROC) curve as shown in the Figure. It is then possible to generate summary measures from the ROC curve that can be used to compare the predictive capacity of different models. Importantly, the framework that generates the ROC curve can also be combined with information about the costs and benefits of different decisions to help to determine how best to target interventions. Plewis (2010) goes into these issues in detail and applies the ideas to predicting educational qualifications using variables measured in early childhood, and to assessing the value of models that predict different kinds of non-response in longitudinal studies.



Plewis, I. (2010) *Constructing and Applying Risk Scores in the Social Sciences.* CCSR Working Paper 2010 - 01

Game Theory and Statistical Disclosure

Elaine Mackey and Mark Elliot

Statistical disclosure control (SDC) is concerned with balancing the competing demands of confidentiality and data utility. To make a decision about where the optimal balance lies one must first assess the risk of a statistical disclosure occurring which, in turn, requires that we establish an understanding of the events that might lead to a disclosure. In the context of research data, we define disclosure as the accurate attribution of not previously publicly available information about a respondent to that respondent. Statistical disclosure is a disclosure which has happened through the interrelated processes of identification, matching and linkage.

There are three things that we need to understand about disclosure events: what are they? how might they arise? and what might their consequences be? The SDC literature has been heavily focused on the first of these and there is a pressing need to strengthen our understanding of the other two components. However, ascertaining how a disclosure event might arise and what its consequences might be is far from straightforward. This is because data is released into a complex environment of which we have only limited knowledge – in part because most previous research has focussed on the data rather than the behaviour of people seeking to obtain and use disclosive information.

One way to gain some conceptual leverage on the 'data environment' is to shift our focus away from the data towards human agency. By examining the actions of, and interactions between, the key agents in an SDC context we can begin to understand how disclosure events might be created and their outcomes shaped. To tackle this problem we are applying a game theoretic analysis to build a picture of disclosure events. Game theory offers us an analytical framework for exploring multi-agent actions and interactions and their most likely outcomes. Its power lies in its potential to provide us with insights into situations that are often far from obvious. For example, whilst it has widely been assumed that a claim of disclosure will lead to a loss of public cooperation, game theory shows us that it is just one possible end consequence of a complex interplay of moves involving multiple agents. This approach is a challenge to the statistical confidentiality field which relies heavily on statistical models that at best give only a partial picture of the disclosure risk problem.

For further discussion see Mackey, E. and Elliot, M. J. (2009) "An application of game theory to the understanding of statistical disclosure events." Proceedings of UNECE worksession on Statistical Confidentiality, Bilbao December 2009.

Routes Into Poverty

Leen Vandecasteele

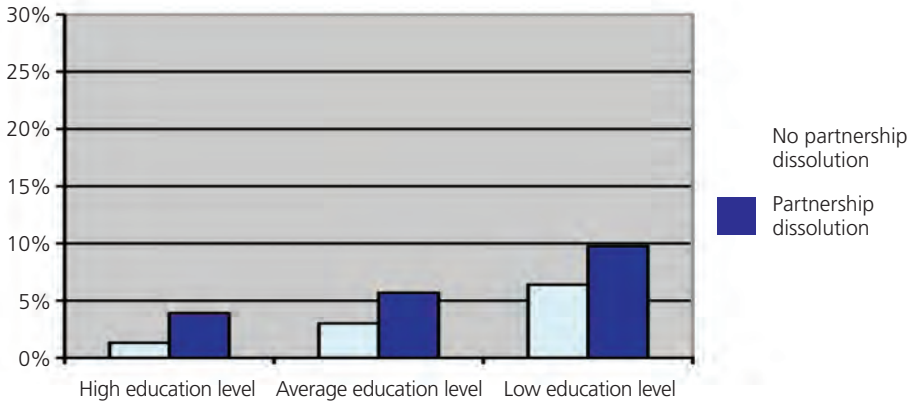
We know that routes into poverty are often linked to crucial life transitions, such as leaving the parental home, the birth of a child, partnership dissolution or losing one's job. This research asks whether these transitions have the same poverty triggering effect for everyone.

Theories of social stratification suggest that more vulnerable people - single parents, people with low education levels or from unskilled social classes - are at risk of entering poverty when experiencing one of these life events. However, it is also argued that a wider range of people are potentially at risk of a period of adversity in their lives because the life course has become more complex and less predictable during the latter half of the 20th century. This is due to processes of social change such as globalization and flexibility which bring precariousness into the labour market. Additionally, a demographic transition has led to increasing divorce rates and the diversification of family forms.

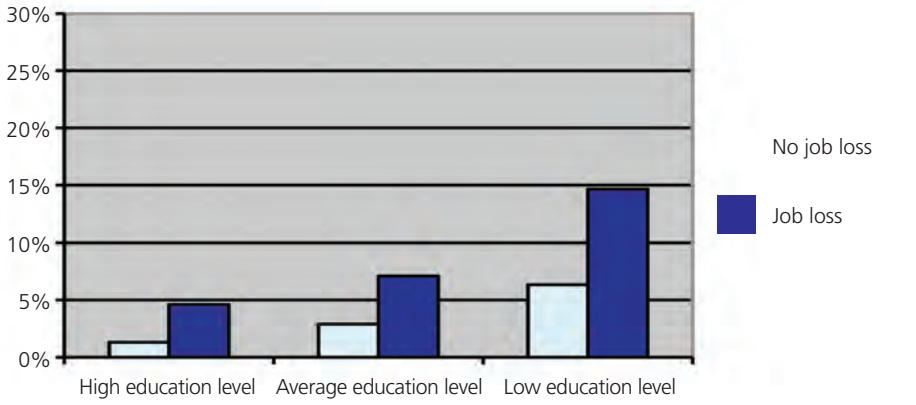
The research is based on random effects event history analyses of the European Community Household Panel Survey. It investigates how the poverty risk of different social groups is affected by risky events in their lives. The results show that the most vulnerable social groups are more strongly affected by the poverty triggering effect of a life stage change like childbirth than other groups. In fact, childbearing is only a poverty trigger for the lower educated, for single mothers or for people from a manual or low-skilled non-manual social class. On the other hand, job loss is a more general poverty trigger, substantially increasing everyone's risk of entering poverty. Partnership dissolution affects the risk of entering poverty for women from all social classes and educational levels, while it does not substantially alter the poverty risk of men.

More details of this research can be found in Vandecasteele, L. (2010) Life course risks or cumulative disadvantage? The structuring effect of social stratification determinants and life course events on poverty transitions in Europe. *European Sociological Review*, available online.

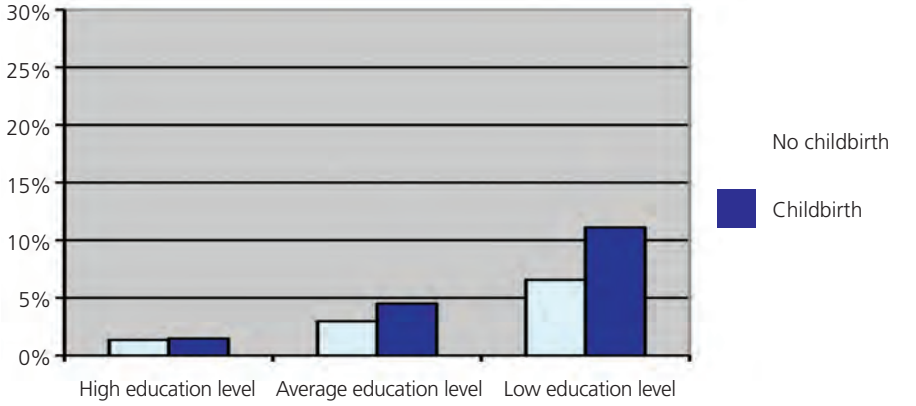
Predicted probabilities of entry to poverty after **partnership dissolution** by the educational level of the head of household, men and women



Predicted probabilities of entry to poverty after **job loss** by the educational level of the head of household, men and women



Predicted probabilities of entry to poverty after **childbirth** by the educational level of the head of household, men and women



What Makes Fathers Dads? An Analysis of The Conditions that Influence Fathers to Get More Involved in Childcare and Housework

Helen Norman

Most industrialised countries have witnessed a shift in the traditional 'male breadwinner' model of family life as new generations of mothers have increasingly combined employment with parenting responsibilities. This has had implications for the role of fathers and their contributions to childcare and domestic work have increased as a result; however they have not kept pace with the change in women's economic activity, suggesting there are social, political, economic and cultural barriers in place.

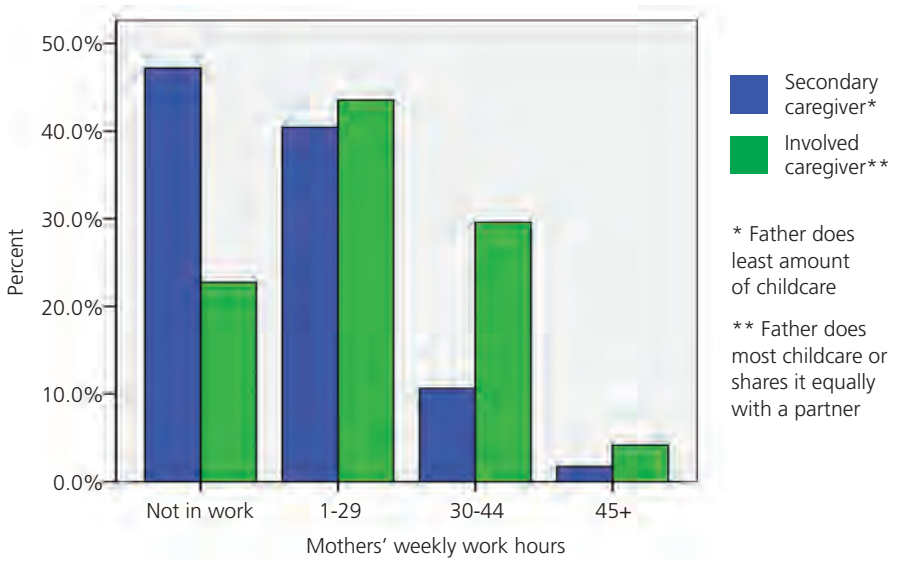
This research uses two sweeps of the Millennium Cohort Study to explore the conditions under which fathers become more actively involved in childcare and housework when children are aged nine months and three years. 'Being involved' is defined as providing the majority of childcare or sharing it roughly equally with a partner. This is examined in the context of a two-parent, heterosexual household in Great Britain. Overall, patterns of employment are found to have the greatest impact on a father's involvement at both time points. When children are aged nine months the hours that a mother works appear to have a greater influence on fathers involvement than the father's own work hours (although this is still important). The likelihood of a father being an involved caregiver to his nine month old children increases dramatically the longer the hours the mother spends in paid work as shown in the Figure.

Fathers are also more involved when they have higher qualification levels, no other children in the household and when their cohort children are male. Some work patterns, such as regular night work and occasional weekend work, are associated with greater involvement which suggests that there are particular ways of working which allow or perhaps require fathers to have a greater involvement in the home.

For a discussion of the impact of social policy and fathers' contributions to childcare and housework see: Fagan, C. and Norman, H. (forthcoming) in F Bettio, J Plantenga and M Smith (ed): *Equality within Reach? Updating women's labour market position in the EU.*

For a fuller discussion of fatherhood see: Norman, H. (forthcoming) doctoral thesis: What makes fathers involved? A longitudinal analysis of the conditions that influence fathers to get involved in childcare and housework, University of Manchester. www.ccsr.ac.uk/staff/helen.htm

The proportion of fathers who are (1) 'involved' caregivers and (2) secondary caregivers in relation to their partner's weekly work hours when children are aged nine months



Source: MCS, sweep one (n=10,241), weighted with sample weights

No Evidence of Ethnic Inequalities in NHS Primary Care

James Nazroo

There are marked ethnic inequalities in health in the UK, as in other developed countries, and it seems reasonable to expect that health services might contribute to, or aggravate, these, even if socioeconomic inequalities are the most important determinant. In this research we set out to uncover the extent of ethnic inequalities in both access to health services and the effectiveness with which health conditions are managed. To do this we used data from the Health Survey for England, which included questions on use of services and allowed us to use a combination of self-report and direct measures (for example, blood tests) to identify for three conditions (hypertension, diabetes and raised cholesterol) whether the respondent had the condition, if the condition had been diagnosed, and if the condition was controlled or uncontrolled.

Findings showed that ethnic minority people were, if anything, more likely than white people to have visited a GP, even after adjusting for differences in self-reported health. However, there was some evidence of less use of hospital services, and very marked inequalities in use of dental services – with rates typically being well under half of those found for the white English group.

For the outcomes of care, we found no evidence of ethnic inequalities in the case of hypertension (see charts 1 and 2) and raised cholesterol, with, in some cases, indications of better care for ethnic minority people. For diabetes there were also few differences, although some suggestion of poorer outcomes for Pakistani and Irish people.

This evidence suggests that there are no ethnic inequalities in access to NHS GP services, nor in the care received for hypertension, raised cholesterol and, probably, diabetes (all conditions that are largely managed in primary care). Of course other conditions, managed in other parts of the NHS, might not show the same pattern, particularly given our findings on poorer access to hospital and dental services. Nevertheless, the lack of inequality found in these data are in marked contrast to extensive evidence indicating inequalities in outcomes of healthcare in the United States, suggesting a difference across healthcare systems.

More details of this research can be found in: Nazroo, J., Falaschetti, E., Pierce, M. and Primatesta, P. (2009) 'Ethnic inequalities in access to and outcomes of healthcare: Analysis of the Health Survey for England' *Journal of Epidemiology and Community Health*, 63, 12, 1022-1027.

Chart 1: Relative risk of undiagnosed rather than controlled hypertension compared with white English people

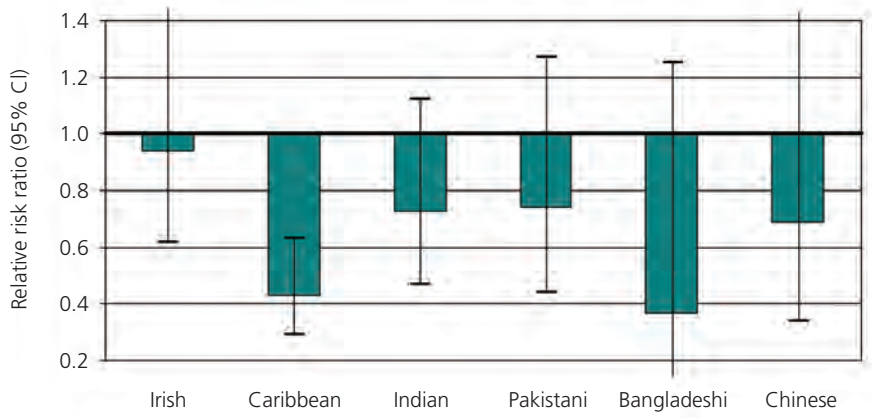
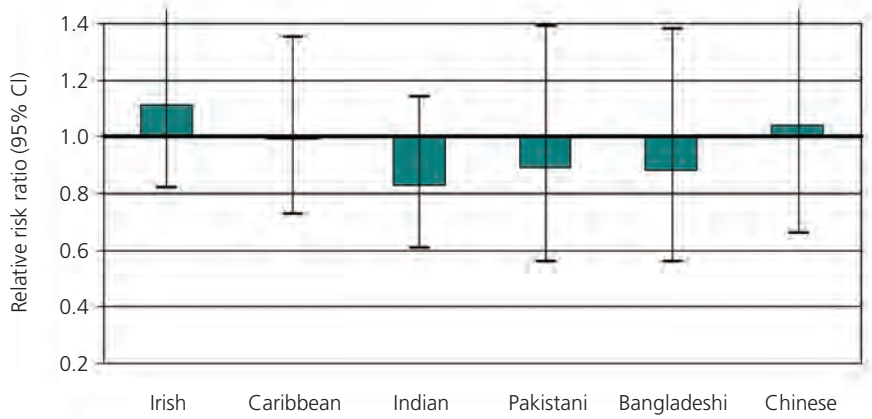


Chart 2: Relative risk of uncontrolled rather than controlled hypertension compared with white English people



Geography of Unpaid Caring

Kingsley Purdam and Paul Norman

The primary statutory responsibility for caring for older people in need lies with the local authority in which a person lives. The local authority social services department has the ultimate duty of care and has to assess a person's needs and ensure that services are put in place. It is acknowledged that the care provided across the UK varies in availability and quality (Commission for Social Care Inspection 2008). Many people's care needs are being met in part, or in full, by unpaid carers.

In the 2001 UK census a person is defined as a provider of unpaid care if they give any help or support to family members, friends, neighbours or others because of long-term physical or mental health needs or disability, or problems related to old age. There are over 6 million unpaid carers in the UK of whom 1.7 million provide more than 20 hours of care per week.

Using the Samples of Anonymised Records from the 2001 Census we have mapped sub-national geographic variations in the amount of unpaid caring in England and Wales.

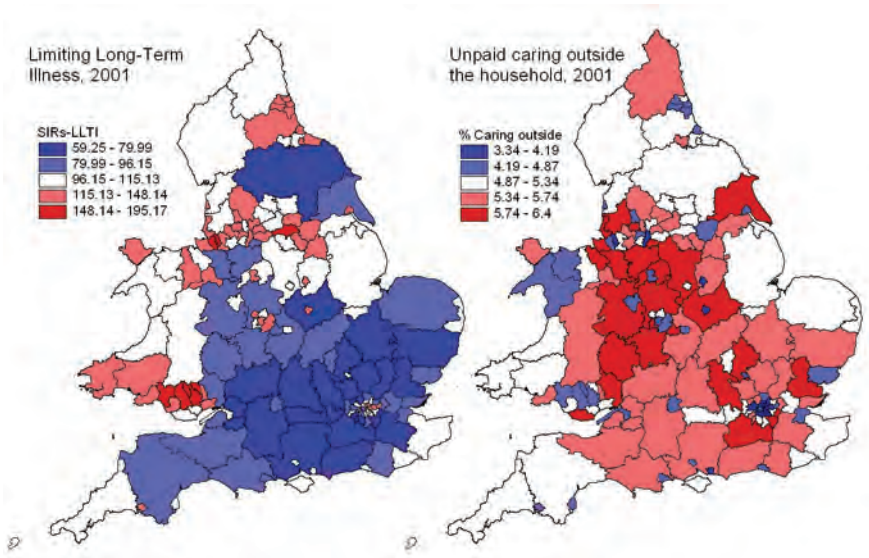
Our analysis suggests that there is an association between rates of unpaid caring and a person's age, social class, their ethnicity and the carer's own health status. Whilst young people are providers of unpaid care our analysis shows that women aged between 40 and 75 years old are the most likely to be unpaid carers. People from lower social classes and people in poorer health are more likely to provide unpaid care than those in higher social classes and in good health.

We have also distinguished whether a person provides unpaid care within the household or outside the household. Where someone reports providing care but there is no-one in the household with a limiting long term illness we have defined them as providing care outside the household. People who provide care and live in the same household as those with a limiting long term illness are defined as providing unpaid care inside the household. Unpaid care outside the household may involve travelling and additional resources in terms of time and financial cost.

There are differences when comparing people who provide unpaid care within or outside of their own home. Amongst unpaid carers aged 40+, women are significantly more likely to provide care outside their household than men after controlling for all other demographic characteristics and area type. Rates of unpaid caring within the household are positively associated with rates of limiting long term illness at the Primary Care Trust level whilst rates of unpaid caring outside the household are negatively associated with rates of limiting long term illness. Those unpaid carers who do not live with the people they care for may face different demands and potential support needs; for example, Shelter (2010) has suggested that many adults are unable to look after their elderly parents because they can't afford to live near them as a consequence of housing costs[1]. Our research findings have important implications for our understanding of caring and for service providers such as, for example, in relation to the government's current focus on independent living for people with social care needs and how sustainable this may prove to be in the longer term for different types of unpaid care.

More details of this research can be found in Norman, P. and Purdam, K. (2010) *Different Geographies of Unpaid Caring in England and Wales.* CCSR Working Paper 2010 - 02.

Unpaid caring: Outside the household



[1]Shelter (2010) Affordability crisis fractures families. Shelter, London.

How do university researchers access data?

Jo Wathan and Christine Farmer

Without a reliable picture of academic working conditions and research practice it is difficult to anticipate the needs of researchers when designing data access conditions. The Social Research Facilities Survey was funded under the Census Programme to find out how the UK academic social science community access data and to better understand their ability to meet conditions which might be placed upon data access.

The survey covers social science academics working in UK institutions. It uses a probability sample so results can be generalised. The data was collected using a mail and online questionnaire with final follow-ups conducted by telephone interview. The sample consists of 1,001 persons, of whom 598 responded. The survey identifies the balance of quantitative and qualitative researchers, their use of microdata and their facilities and work practices.

Where do social scientists work in?

Nearly all academics (99%) work at their institution and the large majority (81%) also work at home. Just over a quarter (29%) also work elsewhere with the most commonly cited place being 'whilst travelling'. 63% of academics reported that their main place of work was their institution, 23% reported that they split their time equally between their institution and home, and 9% cited their home.

What proportion of academics use data?

The majority of academics (90%) have conducted research over the last two years. Of this group, 37% used qualitative methods, 32% used a combination of qualitative and quantitative methods and 27% used quantitative methods. Figure 1 shows the methods by which data are obtained by those who had conducted quantitative research:

- One half (50%) collected their own data – 38% collected data from individuals and/or households and 12% collected data from other units
- 26% used tables or statistics from published reports or a data service
- 9% used data from the census or a survey composed of individual cases

Overall, 56% of academics have conducted quantitative research in the last two years – 22% reported that microdata is relevant to their work, 34% reported that it is not. Further questions were asked of the 22% (197 repondents) who reported using microdata with the aim of assessing the extent to which it is practicable for academics to meet the licensing conditions required for Special Licence data and data held at a secure setting.

None of the questions related purely to census or other secondary microdata. Four statements about analysing microdata were used to gauge the extent to which analysing data held at a secure setting away from the institution is practicable for academics.

Overall, 60% of microdata users agreed or strongly agreed with the statement 'I can usually predict how long a piece of analysis will take me'. We would expect analysing data held at a secure setting to be easier if academics are able to predict how much time they will need. However, 82% agreed that 'It is difficult for me to clear several days to work solely on analysis', which suggests that travelling to a remote access location would be difficult.

Three-quarters (76%) agreed that: 'I rework analysis many times until I'm happy with it' and 38% agreed with the statement: 'I prefer to work at home when analysing data'.

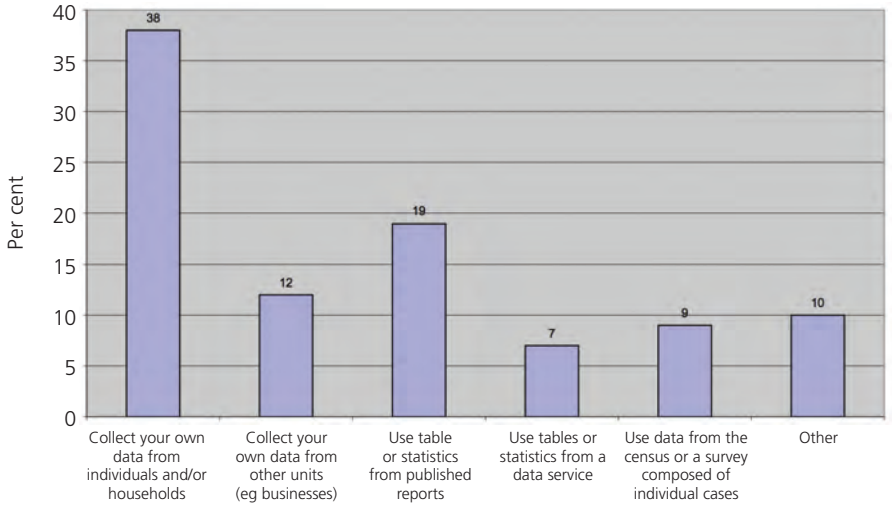
Microdata users were also asked whether they analysed microdata away from their institution. Just over half (55%) do, with 54% taking a copy of the data home. 12% use remote access with Virtual Private Networking (VPN) client and 5% use remote access without VPN.

In order to gauge microdata users' willingness to meet licensing conditions for Special Licence data and data held at a secure setting, respondents were asked if they would do a series of activities if it enabled them to gain more detailed microdata.

Answers to this question included 'Yes, for routine analysis', 'Yes, but only in exceptional circumstances' and 'No'. As we might expect, for routine analysis microdata users were willing to 'Work on analysis solely at your institution in your office' (62%) and, to gain more detailed data for routine analysis, 58% were willing to 'Work on analysis in a safe setting at your institution'. Microdata users are least likely to 'Submit a data application in a month long application procedure' for routine analysis (10%) and 'Travel away from your institution and work on analysis at a specified location' (5%). By contrast, for analysis in exceptional circumstances, 59% of microdata users agreed that they would 'Travel away from their institution and work on analysis at a specified location'.

More information about the survey including further analyses can be found at: www.ccrs.ac.uk/research/facilities

Figure 1: Quantitative methods used by researchers in the last two years



Respondents who have conducted research in the last two years. Weighted. Unweighted base: 564.

News in brief

Religion and Belief, Discrimination and Equality in England and Wales - Theory, Policy and Practice

Professor P. Weller (University of Derby), Dr K. Purdam (University of Manchester), and Dr N. Ghanea (University of Oxford)

This project builds on the methods and results of the first government-commissioned study of Religious Discrimination in England and Wales, 1999-2001. That study found evidence of unfair treatment especially in education, employment and media, particularly as reported by Muslims, Sikhs and Hindus. Some overlap was found between religious and racial discrimination; New Religious Movements also reported experiences of considerable hostility.

The new project based at the University of Derby and in collaboration with the Universities of Oxford and Manchester will take account of the past decade's legal and policy developments on religion and human rights in which the category of "religious discrimination" has become more widely accepted, while modified by reference to "belief" and an emerging policy focus on "shared values", "social cohesion" and "Britishness".

The research includes a national survey and qualitative research in the original case study areas of Newham, Cardiff, Blackburn and Leicester. Norwich will be added as a location to examine recent developments linked with EU labour migration. The project will also use focus groups to help capture the experiences and perspectives of those who understand themselves as "non-religious".

Project outcomes include: a briefing report for opinion-formers and policy-makers in the public, private and voluntary/community sectors. The briefing report will inform a series of knowledge exchange seminars held in Autumn 2012.
For more information see www.derby.ac.uk/religion-and-society

Promoting methodological innovation and capacity building in research on ethnicity

ESRC-funded NCRM Network for Methodological Innovation

Angela Dale, James Nazroo, CCSR, University of Manchester

Sarah Salway, Centre for Health & Social Care Research, Sheffield Hallam University

Lucinda Platt, ISER, University of Essex

This award funds four one-day workshops and a conference. For more details please go to: www.methods.manchester.ac.uk/events/ethnicityinnovation

1. What is ethnicity? What methods best capture it?
Friday, 14 May, University of Essex

This topic will open up questions about the objective existence of 'ethnicity' and discuss the role of categorisation.

2. Methods to assess and understand the role of context in ethnic inequalities
Tuesday, 29 June, Royal Statistical Society, London

How do we unpack the role of 'area' in explaining ethnic inequalities? What is the role of peer groups and friendship networks and what methods are available to asses them?

3. Research methods for new immigrant groups
Friday September 10th, University of Manchester

What are the methodological challenges in collecting reliable information on new migrants? What methods can be used to establish the support services needed by these groups?

4. Mixed methods with large and small scale research
November 2010, University of Sheffield

What can we lean from two mixed-methods projects?

(1) Long-term ill health, poverty and ethnicity
Sarah Salway, Sheffield Hallam University and Lucinda Platt, ISER, University of Essex

(2) Quality of life among older ethnic minority people
James Nazroo, CCSR and Sociology, University of Manchester

Final conference: Methodological innovation in research on ethnicity
March 2011, University of Manchester. The conference will highlight methodological issues identified during the workshops and will identify key themes and methodological innovations.

CCSR Short Courses

Details of the short courses, below, can be found on the CCSR web-site:

26 April 2010	Multiple Linear Regression
27 April 2010	Understanding Statistics
28 April 2010	Logistic Regression
10 May 2010	Data Reduction and Classification
14 May 2010	Multilevel Modelling
17-18 May 2010	Demographic Concepts and Methods
19 May 2010	Population Estimating and Forecasting
20-21 May 2010	Demographic Forecasting with POPGROUP
9 June 2010	Introduction to Longitudinal Data Analysis
15 September 2010	Starting SPSS
16 September 2010	Introduction to Data Analysis Part 1
17 September 2010	Introduction to Data Analysis Part 2
20 September 2010	Introduction to STATA
22 September 2010	Questionnaire Design
23 September 2010	Cognitive Interviewing for Testing Survey Questions
24 September 2010	Standardised Multi-Item Scale Development for Surveys

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Royal Charter Number RC000797 J2813 03.10