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THE UNIVERSITY of EDINBURGH



A welcome note from the editors

10th Anniversary Themed Issue

Cardiovascular and Diabetes Research

Welcome to the 2013 edition of the Edinburgh Ethnicity and Health Research Group (EEHRG) newsletter. This year sees the 10th anniversary of the founding of our research group. To celebrate this landmark, in this issue we share the exciting multidisciplinary work recently completed by our members in the area of cardiovascular disease and diabetes research.

In a thought-provoking piece, Raj Bhopal reframes ethnicity and health research as benefitting the entire population, not just specific minority ethnic groups. Narinder Bansal shares work from the Scottish Health and Ethnicity Linkage Study providing the first Scottish data on cardiovascular burden by self-defined ethnicity. Emma Davidson then presents findings from a systematic review of evidence about adapting health promotion interventions to maximise effectiveness across ethnic minority groups. These insights are substantiated by Sunita Wallia's description of how an intervention aimed at those at risk of type-2 diabetes was adapted to maximise effectiveness for people of Indian and Pakistani origin settled in Scotland.

We have been fortunate to continue to nurture links with international colleagues working in this field. Nazmy Villarroel Williams and Basak Guzel visited the group last year to share with us their experiences. Such visits are an occasion both to learn from other contexts, and also to inform a wider audience of developments in Scotland that are of international significance for the ethnicity and health field. This is also the aspiration of our newsletter. One noteworthy recent example is the move to recording ethnicity data on death records.(1)

We hope you enjoy reading this publication and we warmly welcome people with interests in ethnicity and health to make contact with our group.

The Editors.

(1) *BMJ* 2012;344:e475



The University of Edinburgh Medical School, Teviot Place

Editors:
Narinder Bansal, Alistair Hunter and Raj Bhopal.

Recent visitors:

- Nazmy Villarroel Williams (Pompeu Fabra University, Barcelona)
- Basak Guzel (Akdeniz University, Faculty of Medicine, Turkey)

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EEHRG mission statement

Our members seek to describe and understand the nature of ethnic inequalities in health care and health outcomes, and to work with ethnic minority communities to formulate interventions that are theoretically grounded, culturally appropriate and, in due course, proven to be effective and cost-effective to the NHS. We are engaged in qualitative and quantitative research in collaboration with partner organisations and individuals in academia, the NHS, and the community sector who share our aspiration to work towards the reduction of ethnic health inequalities.

Ethnicity and health research benefits the entire population: concepts and examples.

RAJ BHOPAL, Bruce and John Usher Professor of Public Health

"In much research, the majority population is used as a reference or norm, to provide contrasts, and to make inferences about the minority. Logically, this reasoning is false. The majority also possesses ethnicity"



"By examining epidemiological data through the ethnicity-equality-equity lens for each of the ethnic groups, with appropriate emphasis on White subgroups, we benefit the entire population"

The concept of ethnicity, the population group that you belong to or are perceived to belong to because of cultural and ancestral characteristics, is becoming central as urban societies become increasingly diverse, as a result of international migration. Mostly, the concept of ethnicity has been applied to minority populations, particularly migrants from lower and middle income countries and their descendants, but also indigenous peoples. In this context, insights have been generated that have been intriguing scientifically, but also have presented challenges for public health and clinical care. For example, in the UK setting, why should the prevalence of type II diabetes be 4-6 times higher in South Asian populations than their White European counterparts? Equally, why should the incidence of colorectal cancer be as low as one third of that in White Europeans? What should be the public health response to such observations?

It is widely, but wrongly, perceived that such work applies primarily to minority populations, and not to the majority. Indeed, in much research, the majority population is used as a reference or norm, to provide contrasts, and to make inferences about the minority. Logically, this reasoning is false. The majority also possesses ethnicity, and belongs to one or more ethnic groups. For example, the White (also known as European origin, Caucasian, Europid etc) population actually comprises a number of important and sizeable ethnic groups. In the UK, such groups include English, Welsh, Irish, Scottish, gypsy traveller, other traveller and Eastern European. Obviously, across Europe we have numerous and diverse White European populations.

Recent research from Scotland, particularly from the Scottish Ethnicity and Health Linkage Study,(1;2) has shown how an examination of ethnic variations can be used to shed light on the needs of the entire population. For example, after lengthy puzzling over the comparatively good survival after a heart attack in South Asians in Scotland, including much reanalysis, we realised that it was not actually especially good.(1) It was the White Scottish population that had poor survival, and our work shed light on that population. Similarly, we have been able to show that the White Scottish population is disadvantaged in comparison with most minorities even at birth (unpublished). Disadvantages for the White Scottish population can also be seen in a range of cancers (3). We have shown that while the White Irish and White Scottish populations are very similar, Other White British (mainly English) people have better health than the White Scottish, and this mainly reflects their better social and economic circumstances. By contrast, Scottish South Asians—whether Indians or Pakistanis—are disadvantaged in relation to cardiovascular diseases and diabetes. The best health in Scotland is seen in Chinese people. By examining epidemiological data through the ethnicity-equality-equity lens for each of the ethnic groups, with appropriate emphasis on White subgroups, we benefit the entire population.

Raj Bhopal

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(2) Bhopal R, Fischbacher C, Povey C, Chalmers J, Mueller G, Steiner M, et al. Cohort profile: Scottish Health and Ethnicity Linkage Study of 4.65 million people exploring ethnic variations in disease in Scotland. Int J Epidemiol 2011 Jul 24;40(5):1168-75.

(3) *BMJ Open* 2012;2:5 e001957 (in press)

Burden of cardiovascular disease by ethnic group in Scotland.
NARINDER BANSAL

That coronary heart disease, the leading cause of premature mortality worldwide, varies by migrant status has been demonstrated globally. In the UK, the increase in locally born populations renders country of birth an unreliable indicator of ethnic group, a weakness shared by most of the available research.

In the Scottish Health and Ethnicity Linkage study, through multi-sectoral collaboration with NHS National Services Scotland and National Records of Scotland, we used data linkage to bring together health data and information on self-defined ethnicity from the 2001 census, allowing us to study ethnic variations in cardiovascular disease.

We looked at first incidence of angina, chest pain, myocardial infarction, stroke and heart failure and 28 day case fatality after first MI. Compared to the White Scottish, the Other White British (mostly English) had 20-25% lower risk of these events with differences not fully attenuated on adjustment for education. Pakistanis, particularly men, had the highest rates with a 2-fold excess risk for chest pain and angina, 60% excess risk for myocardial infarction and 40% higher risk for heart failure. The lowest rates were seen in the Chinese group with 30-50% lower risk of events. In comparison, 28 day case fatality after MI was more equitable across ethnic groups with the exception of Pakistani women where it was much better (60% lower) compared to the White Scottish. This disparity was not attenuated on adjustment for age, education, cardiac procedure uptake and travel time to hospital and may reflect lower severity of MI in this group and also poorer survival in the White Scottish.

Similar data on co-morbidity and cardiovascular risk factors such as diabetes, dyslipidaemia, smoking and physical activity as well as treatment are needed to further explore the underlying mediators of these inequalities. We are currently exploring primary care data linkage to achieve this.

Narinder Bansal

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"Pakistanis, particularly men, had the highest rates with a 2-fold excess risk for chest pain and angina, 60% excess risk for myocardial infarction and 40% higher risk for heart failure"

How to adapt interventions to maximise cross-ethnic group effect? EMMA DAVIDSON



Considerable evidence exists, including contributions from EEHRG members, that certain ethnic minority groups experience a higher burden of disease compared with majority white European populations, particularly from chronic diseases such as diabetes and cardiovascular conditions. Addressing these inequalities through lifestyle interventions has gathered increasing support; however, there is a lack of evidence of whether these approaches are salient to, or effective for ethnic minority populations.

We were commissioned by the Medical Research Council to undertake multi-methods research to examine how to adapt health promotion interventions to meet the needs of ethnic minority groups. Our focus was the triad of lifestyle behaviours most implicated in chronic disease: smoking, physical activity and nutrition. The populations of interest were of African-, Chinese-, and South Asian-origin.

A review of UK guidelines and international systematic reviews revealed limited

Cardiovascular and Diabetes Research

"Our systematic review established that adaptation increased the acceptability of interventions and may contribute to increased recruitment and retention"

consideration of ethnic minority populations in recommendations for lifestyle interventions. Our systematic review established that adaptation increased the acceptability of interventions and may contribute to increased recruitment and retention; however, it suggested an inconclusive picture in relation to effectiveness and a need for more studies directly comparing adapted versus un-adapted interventions. No studies of cost-effectiveness were identified. Qualitative interviews provided additional insights into adaptation and a novel framework for conceptualizing ethnicity.

The research also led to the development of a 46 item typology of adaptation and a 'RESET' tool. These have the potential to support the development, design, implementation and reporting of future interventions. The full report will be published by the HTA in the coming months.(1)

Emma Davidson

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Adapting PODOSA to maximise effectiveness across ethnic groups.

SUNITA WALLIA



"In addition to written resources, PODOSA emphasised verbal discourse to increase acceptability of the intervention among people of South Asian origin"

PODOSA is a 3 year randomised, controlled trial in Scotland led by Professor Raj Bhopal and guided by an expert multi-ethnic team of co-investigators and collaborators. The lifestyle intervention is adapted from the Finnish Diabetes Prevention Study aimed at reducing weight and increasing physical activity to reduce type 2 diabetes in people of Indian and Pakistani origin settled in Glasgow and Edinburgh. The adaptations were done essentially to make it culturally relevant to this population group.

The 10 main adaptation points were:

1. Reviewing existing resources and data collection material and where necessary adapting or developing new material (2004-2006).
2. Appointing culturally competent and preferably bilingual UK registered dietitians for delivering the intervention (Feb 2007).
3. The use of both a multilingual panel, and professional translators, to help translate data collecting materials in easily understandable Urdu and Gurmukhi (written Punjabi) (April - July 2007).
4. Applying multi-pronged recruitment strategies i.e. visiting local multicultural centres and South Asian religious places and engaging community recruiters to maximise recruitment (April 2007 -Sept 2009).
5. Home setting as opposed to clinic setting thus making this a family based trial.
6. The cooperation of the household's main cook being a criterion for enrolment.
7. Flexibility in appointments was a major adaptation inclusive of evening or week end appointments.
8. In addition to written resources, PODOSA emphasised verbal discourse to increase acceptability of the intervention among South Asians.
9. Simple relevant resources, such as a South Asian recipe book and a Bollywood style drama DVD on the prevention of diabetes, were developed as both educational tools and as gift tokens at annual appointments.
10. Although not an adaptation *per se*, an annual newsletter was sent to recruits to keep them interested and motivated in the trial.

Further information: www.podosa.org.uk

Sunita Wallia
PODOSA Lead Research Dietitian

* A full account of the adaptation process has been submitted for publication to *Health Promotion International*.

Visiting Researcher: Nazmy Villarroel Williams

My path to studying health and migration has focused on global health and public health. For my PhD research at Pompeu Fabra University in Barcelona, I became interested in the field of inequalities in health among immigrant populations in Spain. I looked at the influence of social class and gender by country of birth, selecting people from the Spanish National Health Survey.

I decided to come to study at Edinburgh University because I wanted to learn from Professor Bhopal´s work, enriching my thesis and gaining a more professional perspective.

During my stay I collaborated in a literature review focusing on the use of ethnicity in health services. I also completed the course "Concepts of Epidemiology" taught by Raj Bhopal, Colin Fischbacher and Narinder Bansal.

My experiences in Edinburgh, witnessing advances in immigration and health research first hand, were very positive. They helped me grow professionally and I learned much about the field of social epidemiology. I would highlight above all the human qualities and the great hospitality that made this one of the greatest experiences of my career so far.

Nazmy Villarroel Williams

Visitors' Experiences

"My experiences in Edinburgh, witnessing advances in immigration and health research first hand, were very positive"

PhD student: Juneda Sarfraz

I am currently in the 2nd year of my PhD at the Centre for Population Health Sciences, University of Edinburgh, on the Edinburgh Global Scholarship. I completed my MBBS in 1992 followed by a Master of Science in Public Health in Pakistan in 2000, and a Masters in Safety Promotion, Karolinska Institute, Sweden in 2006. My interest in diabetes among South Asians at home and in the diaspora brought me to Edinburgh.

I started my career as a clinician, however later on I worked in public health in various capacities including teaching and training at a school for public health nursing and community based health workers. For 5 years I taught Health Promotion, Maternal and Child Health and Health Systems on the MSc in Public Health at the National Institute of Public Health in Pakistan.

My area of interest is ethnicity and non-communicable diseases i.e. diabetes. My PhD research project is titled "Food and eating practices of multi-generational Pakistani Muslim families living in Scotland; a qualitative study". I am currently the convenor of the Edinburgh Ethnicity Health and Research Group, University of Edinburgh. I intend to continue my career in academia and research focussing on health promotion in resource-poor settings, especially in the context of non-communicable diseases.

Juneda Sarfraz



Members' profiles

Professor Aziz Sheikh

I trained in Medicine at University College, London where I also undertook an intercalated BSc in Physiology. After completing GP Vocational Training, I won a series of regional/ academic fellowships, which enabled me to acquire a broad-based training in research methods, including reading for a Masters in Epidemiology at the London School of Hygiene and Tropical Medicine. I have held academic posts at Imperial College London and St George's, University of London. I moved to Edinburgh to take up the post of Professor of Primary Care Research & Development in 2003 and since 2011 have been Director of Research at the Centre of Population Health Sciences.

I have had a long-standing interest in ethnicity, with a particular interest in the relationship between religious identity, health and healthcare delivery. I have published widely on ethnicity-related issues in both specialist and generalist journals, and am co-editor of Caring for Muslim Patients, Caring for Hindu Patients and Palliative Care for South Asians: Muslims, Hindus and Sikhs.

I co-lead the Edinburgh Ethnicity and Health Research Group with Raj Bhopal.

Aziz Sheikh



Current grants related to ethnicity and health

Muslim Communities Learning About Second-hand Smoke - MCLASS pilot cluster randomised controlled trial. K. Siddiqi, University of York (PI), Sheikh A, Amos A, et al. £271,061 from MRC/NPRI (2012-2014).

Prevention of diabetes in South Asians. Bhopal R et al. (PI). £1.1m (approximately) from NPRI plus NHS R&D funding-approx. £250k. (2006-ongoing).

Born in Bradford: a longitudinal multiethnic birth cohort study to investigate the determinants of childhood growth, development and health. Bhopal R et al. (Co-investigator). £1.9 million from NIHR (07/H1302/112) (2006-ongoing).

A cluster randomised controlled trial of the effectiveness and cost-effectiveness of an obesity prevention intervention in primary school age children. Bhopal R et al. (co-investigator). £2,653.873 from NIHR (2010-ongoing).

Enhancing the Scottish Health and Ethnicity Linkage Study (SHELS) by adding respiratory and gastrointestinal mortality/ morbidity data and assessing the value of linking primary care risk factor data. £225,000 from CSO (Supplements from NHS sources £39,000) (Jan 2011- March 2013).

A message from Raj



"The multi-ethnic society is almost the norm in cities across the world"

Dear Reader,

If you have found this newsletter interesting or informative, then please do consider joining our group if you live or work in the central belt of Scotland, or consider setting up your own group in your locality. We have found that the camaraderie of having a group spurs better and more enjoyable work.

Feel free to circulate this newsletter to your colleagues and pass the word around. As everyone can see, the world is changing, and the multi-ethnic society is almost the norm in cities across the world. I think this makes for a more interesting and creative environment. However, we have to work hard to make sure that such societies live harmoniously and productively, and avoid the kind of racial tensions and enmities that so easily arise, and that are so destructive.

The goal of optimal health in its many manifestations – mental, physical and social – is central to the successful multi-ethnic society. We hope that our work is contributing towards this important goal. I would be glad to have your feedback and to hear your views on this matter – please feel free to write to me at Raj.Bhopal@ed.ac.uk

Raj Bhopal, co-convenor of EEHRG and Professor of Public Health, University of Edinburgh.

Contact us

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Members' Interests

Name	Email	Research Interests
Narinder Bansal	n.bansal@ed.ac.uk	Health inequalities; CVD, diabetes, mental health; life course epidemiology
Raj Bhopal	Raj.Bhopal@ed.ac.uk	CVD & diabetes epidemiology; Healthcare and policy
Genevieve Brin	genevieve.brin@ed.ac.uk	Socioeconomic status; CVD; Gastrointestinal disease
Emma Davidson	emma.davidson@ed.ac.uk	Health promotion; Chronic disease; Health service evaluation
Anne Douglas	anne.douglas@ed.ac.uk	Diabetes prevention; South Asians; Ethnicity coding
Dermot Gorman	Dermot.gorman@ nhslothian.scot.nhs.uk	A8 migration; Migrant friendly healthcare
Alistair Hunter	alistair.hunter@ed.ac.uk	Migration; Mortality; Older migrants
Tasneem Irshad	Tasneem.irshad@ed.ac.uk	Palliative care; Hereditary conditions; cancer
Drew Millard	Andrewmillard@nhs.net	Routine data improvement and analysis
Zoe Morrison	Zoe.morrison@ed.ac.uk	Patient records; Personalised care; Health inequalities
Jamie Pearce	jamie.pearce@ed.ac.uk	Health inequalities; Health geography; Environment and health
Snorri Rafnsson	sbrafnsson@ed.ac.uk	Migrant health; CVD and diabetes; Ethnicity coding quality
K. Nundita Reetoo	Nundita.Reetoo@cc3.org.uk kumari.reetoo@glasgow.ac.uk	Intercultural communication; Long term conditions management; mental health
Juneda Sarfraz	j.sarfraz@sms.ed.ac.uk	Health promotion; social determinants of health; NCD
Aziz Sheikh	Aziz.sheikh@ed.ac.uk	Religion; Epidemiology; Clinical trials
Sunita Wallia	sunita.wallia@ggc.scot.nhs.uk	Obesity; Diabetes; Family dynamics

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