

**Methods** Data from systematic reviews, dedicated methodological experimental studies and qualitative studies nested within behaviour change trials will be presented.

**Results** Study findings indicate: (1) the existence of previously unrecognised recruitment effects on behaviour; (2), that assessment reactivity is a widespread form of contamination in behaviour change trials; (3) that randomisation itself may induce behaviour change; and (4) that these types of effects are highly unlikely to be additive to the effect of behavioural interventions, thus leading to biased estimates of effectiveness.

**Conclusions** The scale of the problem, the implications for reviews of existing trials, and the reasons for the lack of development of study in this crucial area for behaviour change trials are discussed. Hypotheses and study designs are proposed to guide new research which seeks to quantify problems with existing practice in the design and conduct of trials.

**P1-40 EXPERIENCE OF DISCRIMINATION IS A SIGNIFICANT ASSOCIATE OF MENTAL ILL-HEALTH IN IRISH TRAVELLERS. FINDINGS FROM THE ALL IRELAND TRAVELLER HEALTH STUDY**

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**Introduction** Traveller are an indigenous minority in Ireland, with poorer life expectancy and health status than the general population. We describe here the self-reported burden of mental ill-health and its associates.

**Methods** A census survey of all Travellers was undertaken, with 8492 enumerated families (80% response rate). A random subset of 1796 adults completed a health survey. Peer researchers employed a novel oral-visual computer data-collection methodology. Age and sex-adjusted logistic regression models were fitted, with one or more days of mental ill-health in the last month as the dependent variable.

**Results** Overall 39% of men (225/580) and 41% of women (495/1211) reported mental ill-health, increasing with age ( $p=0.001$ ). In a multivariable model, factors associated with increased odds of mental ill-health were poorer physical health (OR 4.7, 95% CI 3.3 to 6.8), being unable to enjoy usual activities (OR 17.2, 95% CI 11.7 to 25.2), regular alcohol consumption (OR 1.5, 95% CI 1.0 to 2.3), agreeing that drugs are a community problem (OR 1.8, 95% CI 1.3 to 2.6), that nomadism is important (OR 1.5, 95% CI 1.0 to 2.2), and increasing experience of discrimination (OR 1.1 per 1-point increase in scale, 95% CI 1.0 to 1.1). Factors associated with reduced odds were male sex (OR 0.7, 95% CI 0.44 to 0.95), rural vs urban living (OR 0.5, 95% CI 0.4 to 0.8), and social supports (OR 0.84 per 10% increase in scale, 95% CI 0.75 to 0.97). AUROC was 0.92.

**Conclusions** This novel study comprehensively profiles associations of mental ill-health in a vulnerable minority community.

**P1-41 THE INFLUENCE OF FOREST LANDSCAPE DESIGN ON HUMAN-TICK CONTACT AS AN EFFORT TO PREVENT EXPOSURE TO TICK-BORNE DISEASES**

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**Background** Reducing exposure to ticks is currently the most effective method of prevention of Lyme borreliosis, which appears to pose a new public health problem in heavily urbanised areas. The analysis of contacts between the routes that people adopt in forests (where ticks live) and the spaces and environments considered to be of risk (the most suitable habitat for ticks) constitutes a privileged avenue of study. There is a need to study these spatial dynamics, as well as to

study ways in which it is possible to minimise risk via the landscape and design.

**Methods** Two databases were created, one related to ticks that can transmit the infection and the other to trajectories of forest users. The first was fed by samples collected in the Sénart forest (France) and the second gathered descriptive data on volume and characteristics of human flow through the forest area.

**Results** All the data have been entered into a GIS database. A characterisation of the busiest portions of routes in relation to data on tick populations densities and distribution (and, in fact, a characterisation of individual vulnerabilities on the type of socio-demographic profile associated with these portions) has then been conducted and has enable us to model human exposure to ticks according to the locations visited by users.

**Conclusions** Various actions related to forest management will be discussed with the forest officers such as, for example, the relocation or closure of some trails, or the changing of points of attractions for users in the forest.

**P1-42 ASSOCIATIONS OF AREA DEPRIVATION OVER THE LIFECOURSE AND PHYSICAL CAPABILITY IN MID-LIFE: FINDINGS FROM THE 1946 BRITISH BIRTH COHORT**

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**Background** Recent work has shown that factors across the whole of life influence physical capability in later life. Therefore, when investigating area socioeconomic effects on physical capability, area exposures should be assessed across the lifecourse to take account changes in residence and secular trends of an area.

**Methods** Using data from the MRC National Survey of Health and Development, we examined the relationship between area low social class (per cent partly- or un-skilled of all occupied in a local government district) at ages 4, 26, and 53 years [residence linked to census data for years 1951, 1971, and 2001] with objective measures of physical capability (grip strength, standing balance and chair rise time) at age 53 years.

**Results** After adjustment for area at other years, a higher area low social class at 4 and 53 years was associated with decline in mean balance time of 4.4% (95% CI 0.6 to 8.1) and 7.6% (3.6 to 11.6), respectively, but only area at age 53 with higher chair rise time [mean change 1.8% (95% CI 0.0 to 3.6) at 53 years. Associations were reduced but still apparent after adjustment for individual occupational social class at the same three ages. There were no significant associations between area and grip strength.

**Conclusions** For the first time, our study shows that living in a socioeconomically deprived area in early and later life adversely affect some measures of physical capability in mid-life. Future work is needed to explore potential mechanisms of area effects by age and physical capability measures.

**P1-43 BRIDGING ELECTRICAL DATA ENTRY SHEET AND STATISTICAL SOFTWARE BY STANDARD DATA MODEL**

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**Introduction** Interoperability of collected dataset has been distress for researchers. Introduction of database management software made some improvements, however, still we need many of