

health problem in the UK. Health and other care settings have the potential to act as screening sites in order to identify and support gamblers who may be at high risk of experiencing gambling related harm. This study aims to identify interventions to screen for risk of gambling related harm in the general population which may be delivered in health, care and support settings.

**Methods** Systematic review and narrative synthesis. Searches of key databases and grey sources since 2012 were undertaken in October 2019. We included all studies (with no limit on design) which related the inclusion of screening and support for (previously unidentified) problem gambling in users of health, care and support services. The findings were synthesised narratively and a typology of interventions and supporting evidence was developed.

**Results** Electronic database searches generated a total of 5826 unique hits. Nine studies published 2013–2019, along with thirteen grey literature documents met our eligibility criteria and were included in the synthesis. The published studies originated in the UK (3), Sweden (2), US (1), and Australia (3). Grey literature was from the US.

The papers in academic journals (n=9) provided evaluative data from interventions, or qualitative data on practitioners' views. Three of these papers evaluated the use of screening, brief intervention and referral to treatment (SBIRT) approaches to identify and treat people experiencing or at risk of problem gambling and related harms. These were delivered in general practice, a mental health support service, and a substance abuse treatment service. Six papers provided evidence regarding the feasibility and acceptability of delivering interventions in settings including general practice, mental health services, consumer credit counselling and social work. Evidence of feasibility in varied contexts was further supported by grey literature reports describing the implementation of interventions such as training materials, and transfer of the use of SBIRT from substance abuse populations by practitioners.

**Discussion** Health, care and support services offer potentially important contexts in which to identify and offer support to people who are at risk of becoming problem gamblers. Screening intervention approaches (such as SBIRT) used with people who have other addictions, appear to be feasible and acceptable in a range of community and healthcare settings for those at risk of gambling harm. However, evidence of effectiveness and cost-effectiveness in this population is currently limited.

OP36

#### WHAT PATHWAYS HAVE BEEN THEORISED AND TESTED BETWEEN ETHNIC DENSITY AND MENTAL ILL-HEALTH? A THEORY-BASED SYSTEMATIC REVIEW

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**Background** A growing body of literature explores the effects of ethnic density on various mental health outcomes. However, the results have been mixed and there is a need for a better understanding of the pathways involved. This systematic review aims to synthesise theoretical and empirical evidence on the pathways between ethnic density and mental health

that have been conceptualised and tested in UK based research.

**Methods** A theory-based systematic review of UK evidence was conducted. 15 literature databases were searched without date restriction until June 2019. The main eligibility criteria were as follows: an individual level mental health or well-being measure and ethnic density measured at a defined geographical unit. The population of interest was any ethnic group, both minority and majority. Reviewer NB conducted all stages of the review, with random 10% samples double reviewed by a second reviewer (SS) at each stage. All studies were assessed on quality using a refined version of the CASP checklist. The results of the review were synthesised in a thematic format, grouped by study context, mental health outcome, and the pathways tested or discussed. Following this, a visual representation of the hypothesised and tested pathways was developed.

**Results** An initial search returned 3,664 documents after removing duplicates. 286 documents were included after title and abstract screening, and a final 36 papers identified after full text screening. In general, evidence for an ethnic density effect was found in papers which had larger sample sizes and employed smaller areal units. Hypothesised causal pathways were inconsistently tested in statistical analysis. The main pathways analysed were: racism and victimisation, migration and residency, social capital and support and English language proficiency. 11 papers did not test any pathways.

**Conclusion** The hypothesised pathways operating between ethnic density and mental health have been tested inconsistently. However, several plausible pathways have been identified, particularly those relating to racism and social capital and support. A more consistent focus on pathways and the application of more specific analysis techniques is required in order to advance our understanding of the pathways behind the ethnic density effect. It is arguable that a considerable body of US research is missed due to the UK focus of this study. However, this focus was deemed necessary in order to gain a better understanding of the potential causal pathways involved.

OP37

#### ARE SOCIAL ENGAGEMENT AND LONELINESS DIFFERENTIALLY ASSOCIATED WITH NEURO-IMMUNE MARKERS IN OLDER AGE? A FIXED EFFECTS ANALYSIS OF TIME-VARYING ASSOCIATIONS IN THE ENGLISH LONGITUDINAL STUDY OF AGEING

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**Background** In recent years, associations between social isolation, loneliness and morbidity and mortality have become the focus of a great deal of cross-disciplinary research, public policy, media reporting and the wider public discourse. Some have suggested changes to our social structures have triggered a 'loneliness epidemic' to which older adults are particularly vulnerable. However, the mechanisms by which isolation may influence our biology and ultimately bring about disease states remains unclear. Furthermore, complex and longitudinal