OP28 WHAT IS THE IMPACT ON HEALTH AND WELLBEING OF INTERVENTIONS THAT FOSTER RESPECT AND SOCIAL INCLUSION IN COMMUNITY-RESIDENT OLDER ADULTS? A SYSTEMATIC REVIEW OF EMPIRICAL STUDIES

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Background Diminished respect and social inclusion may negatively impact on older people's health. Although many interventions promoting respect and social inclusion have been developed, the evidence of their impacts is unclear. This systematic review aimed to identify the effects of such interventions on the health of older people, as part of an empirical investigation of this topic in Liverpool.

Methods Eligible studies were identified by searching six bibliographic databases using a pre-piloted strategy, screening reference lists of retrieved items and searching organisational websites (January 1990 to January 2015). The study inclusion criteria were: included community-resident people aged 60+; measured the impact of an intervention to promote respect and social inclusion on physical/mental health; published in English. All study designs were eligible.

Titles and abstracts, and full texts were screened for eligibility by one reviewer. A second reviewer independently screened a 10 percent random sample. One reviewer extracted data into standardised forms, and assessed the quality and risk of bias using the Liverpool University Quality Assessment Tool for quantitative studies, and an adapted version of a tool developed by Harden *et al*, and May and Pope for qualitative studies. Narrative synthesis of study findings was conducted as heterogeneity of interventions, outcomes and designs precluded meta-analysis.

Results Of 27,354 records retrieved, 62 studies (31 quantitative, 9 qualitative, 22 mixed methods) met inclusion criteria. A broad range of interventions were identified, focusing on: mentoring; dancing; music/singing; art and culture; information-communication technology; intergenerational programmes. Most studies had high risk of bias, particularly regarding sample representativeness. Impacts were reported on a varied range of health outcomes. For example, music/singing improved mental health related quality of life and anxiety, dancing interventions improved balance and stability, and intergenerational interventions improved depressive symptoms/mood, quality of life, and wellbeing. Qualitative evidence enhanced understanding of health and psychological benefits of the interventions reported by older people, as standard outcome measures (e.g. depression scales) often failed to capture the nuanced effects of interventions.

Conclusion Whilst this review indicated that interventions on respect and social inclusion impact positively upon the health of older people, the included studies were heterogeneous and many had considerable risk of bias, which should be addressed in future studies. Many, though not all, of the interventions were delivered as projects to selected groups, raising important questions about feasibility and impact of wider implementation to secure population benefits. Key limitations included searches restricted to date and to English language.

Cancer/Chronic Disease

OP29 ARE SOCIOECONOMIC CONDITIONS ASSOCIATED WITH ASTHMA PREVALENCE, SEVERITY, AND TREATMENT ACCESS? A CROSS-SECTIONAL STUDY OF CHILDREN LIVING IN LOW-INCOME SOUTH AFRICAN COMMUNITIES

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Background South Africa has the highest prevalence of childhood asthma in sub-Saharan Africa and the fourth highest asthma mortality rate among young people worldwide. While poverty and social deprivation are pervasive, asthma studies in the region have largely focused on biomedical factors or urban-rural differences. This study sought to identify broader socioeconomic risk factors for childhood asthma prevalence, severity, and treatment access in South Africa and possible mediating pathways.

Methods We recruited 6,002 children aged 10–17 through door-to-door household sampling of six randomly selected low-income urban and rural sites in three South African provinces. Self-report questionnaires measured demographics, family structure, community violence, social support, household responsibilities, poverty, employment, and psychological symptoms. Asthma was indicated by self-reported diagnosis, with severe asthma defined as at least one asthma attack in the past month. Asthma treatment was defined, by minimum standards, as having a reliever inhaler. Multivariable logistic regressions provided odds ratios (ORs) for possible risk factors for asthma prevalence, severe asthma prevalence, and treatment access, adjusted for age, gender, urban-rural location, and province. Multiple mediation analyses using bootstrap confidence intervals (CIs) were conducted to test indirect risk pathways.

Results Child anxiety [OR = 1.08, (95% CI) 1.04–1.12] and community violence (OR = 1.14, 1.00–1.30) were associated with greater odds of having asthma. Children with more outdoor housework (OR = 0.83, 0.71–0.98) and living in greater poverty (OR = 0.93, 0.88–0.99) had lower odds of having asthma. Severe asthma was predicted by child depression (OR = 1.14, 1.03–1.26) and greater household poverty (OR = 1.14, 1.01–1.28). Responsibility for more outdoor (OR = 0.66, 0.46–0.95) or indoor (OR = 0.73, 0.53–0.99) household tasks and living with more children were associated with lower odds of having asthma treatment (OR = 0.80, 0.67–0.96), while children living with more employed people had higher odds of having treatment (OR = 1.42, 1.06–1.92). Most socioeconomic factors operated in 'risk pathways', wherein structural factors (e.g., urban living) were associated with individual factors (e.g., less outdoor tasks), which predicted greater odds of having asthma or severe exacerbations.

Conclusion Children living in greater poverty had lower odds of having asthma, potentially due to less urbanised lifestyles, but higher odds of having severe asthma and lacking treatment. Higher psychosocial stress may contribute to asthma onset and severity, while household-level stress may impede

children's access to treatment. While prospective longitudinal research is needed to infer causality, findings support the utility of moving beyond the biomedical model in addressing the prevention and treatment of childhood asthma.

OP30 HOW DO ADVERSITIES PREDICT ONSET OF RHEUMATOID ARTHRITIS? EVIDENCE FROM THE ENGLISH LONGITUDINAL STUDY OF AGEING

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Background Socioeconomic inequalities in prevalence of rheumatoid arthritis (RA) indicate that adverse exposures such as financial hardship, family difficulties, and traumatic events contribute to its onset. We investigate: (1) Whether adversities predict RA onset (2) How adversities at different life stages combine to predict RA onset (3) Whether adversities associated primarily with material and psychosocial pathways independently predict RA onset, after adjustment for health behaviours.

Methods The English Longitudinal Study of Ageing is representative of adults aged 50+ living in private households. Data collected bi-annually between 2002 and 2012 were used to measure age of RA onset. Retrospective life-history information was used to measure a wide range of adversities and smoking history. Indices of adversity were created for each life stage, to measure adversity accumulated over life stages, and for different types of adversity.

Multiple imputation with chained equations was used to impute missing values. Cox regression analyses were estimated of RA with onsets from 45 and 60 on adversity, adjusting for birth cohort and gender. Stata14 was used.

RA onset was regressed on total life course adversity, number of life stages (childhood, youth, early adulthood) during which adversity was reported, adversity during each life stage with mutual adjustment, and material and psychosocial adversities with mutual adjustment and adjustment for smoking.

Sensitivity analyses excluded respondents reporting pain, depression, and with poor cognitive function at the time of the life-history interview.

Results 6,663 respondents were included; 208 developed RA from age 45.

For onset from age 45, each additional adversity up to a maximum of 8 predicts RA onset; hazard ratio HR = 1.086, 95% confidence interval 95% CI: = 1.004–1.174. Evidence is weak that adversities at each life stage combine cumulatively to predict RA onset; for each additional life stage with adversity (maximum three life stages), HR = 1.155, 95% CI: = 0.937–1.424. After adjustment for adversity during other life stages, adversity during youth (maximum three adversities) is salient; HR = 1.253, 95% CI: = 1.052–1.492. Evidence is weak that after adjustment for smoking, adversities associated with material (maximum two adversities) and psychosocial (maximum three adversities) pathways independently predict RA onset; HR = 1.34, 95% CI: = 0.894–2.018, HR = 1.28, 95% CI: = 1.043–1.577, respectively.

Results for onset from age 60 and for all sensitivity analyses provide similar findings.

Conclusion Evidence about adversity and RA onset is sparse, our numbers are small, and these findings require replication. Nevertheless, they indicate the importance of adversity in the development of RA, and raise questions about the mechanisms involved.

OP31 COMPARISON OF ETHNIC GROUP CLASSIFICATION USING NAMING ANALYSIS AND ROUTINELY COLLECTED DATA: APPLICATION TO CANCER INCIDENCE TRENDS IN CHILDREN AND YOUNG PEOPLE

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Background In routine health datasets, such as hospital episode statistics (HES), ethnicity information is not always collected or the quality of data may be unreliable. This may have implications when assessing outcomes by ethnicity. Name analysis algorithms are an alternative method for assigning ethnic groups to individuals based on their surname and forename. We used Onomap, a name analysis algorithm, to investigate if the association between ethnicity and cancer incidence varied according to how ethnicity was assigned.

Methods Cancer registrations between 1998 and 2009 in children and young people (0–29 years) were extracted from the Yorkshire Specialist Register of Cancer in Children and Young People (n = 3992). Patients were linked to inpatient HES data (1997–2011) to obtain information on ethnicity and their surname and forename were matched to an Onomap ethnicity. Each source of ethnicity was categorised as non-South Asian (NSA) or South Asian (SA). A further ethnicity indicator was defined based on the combined results of HES and Onomap ethnicities ("Combined"). Direct age standardised incidence rates (ASR) were calculated and incidence rates between ethnic groups were compared using Poisson regression.

Results HES ethnicity was missing in 528 (13.2%) patients. The proportion of patients identified as SA was slightly lower for Onomap (7%) compared to HES (8%) and the "Combined" indicator (9%). NSA incidence rates were lower based on HES than Onomap or the "Combined" indicator; ASR for HES was 150 per 1,000,000 population compared to 174 for Onomap and 171 for "Combined". For SAs, HES and Onomap produced similar results (ASRs 162 and 163 respectively) which were lower than the ASR based on the "Combined" indicator (ASR = 201). For all cancers combined, a statistically significant difference between ethnic groups was only evident using the "Combined" indicator; cancer incidence was 18% higher in SAs (IRR = 1.18 (95% CI 1.05–1.31)). Differences in incidence by diagnostic group varied depending on the source of the ethnicity indicator used; lymphoma incidence rates were significantly higher in SAs but the magnitude of this difference varied from 27% (Onomap, (95% CI 1.00–1.62)) to 60% ("Combined" (95% CI 1.29–2.00)).

Conclusion Using different methods of assigning ethnicity can result in different estimates of ethnic variation in cancer incidence. Combining different methods of ethnicity assignment in a single indicator results in a more reliable estimate of ethnicity than use of one single source. Further validation of these methods in another large health data set of children (Paediatric Intensive Care Network Audit) is planned.