inequalities. Reducing access to fast-food stores may have greatest impact for low-income households but mostly in affluent areas. This may imply a greater range of alternatives to fast food in those areas.

OP106 THE CONTRIBUTION OF MATERNAL PSYCHOLOGICAL DISTRESS TO INEQUALITIES IN CHILD MENTAL HEALTH PROBLEMS: DIFFERENTIAL EXPOSURE AND DIFFERENTIAL SUSCEPTIBILITY IN THE UK MILLENNIUM COHORT STUDY

1A Pearce*, 1PM Henery, 1M Green, 2S Hope, 3D Taylor-Robinson, 4A Leyland. 1MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK; 2UCL GOS Institute of Child Health, UCL, London, UK; 3Department of Public Health and Policy, Institute of Psychology, Health and Society, University of Liverpool, Liverpool, UK

Background Reducing prevalence and inequalities in child mental health problems (CMHP) will improve life chances and prevent the perpetuation of social inequalities. Research seeking to identify options for reducing health inequalities often aims to identify amenable risk factors on the pathway between socio-economic circumstance (SECs) and health. Such risk factors may create health inequalities via two mechanisms: differential exposure (risk factor is more prevalent in disadvantaged groups) and differential susceptibility (health impacts of the risk factor are worse in disadvantaged groups). Most research focuses on differential exposure, using mediation analysis. However, most mediation methods produce inaccurate estimates if differential susceptibility (i.e. an interaction) is present. Furthermore, differential exposure and differential susceptibility may reveal alternative or complementary policy actions. We used a novel effect decomposition method to examine the contribution of maternal psychological distress (MPD) to inequalities in CMHP in the nationally-representative UK Millennium Cohort Study (born 2000–2002, n=18,000).

Methods SECs (exposure) were represented by maternal education (GCSE grades A*-C, yes/no, age 9 months), MPD (risk factor) by the Kessler scale (continuous, 3y), and CMHP (outcome) by the Strengths and Difficulties Questionnaire (borderline-abnormal, yes/no, 5y). The total effect (TE) of SECs on CMHP was estimated using risk ratios (RR) and decomposed, using Stata’s ‘Med4way’, into: the direct effect and effects via MPD due to: mediation (differential exposure), interaction (differential susceptibility), and mediated interaction (when SECs affect MPD and its impact on CMHP). Confidence intervals were estimated using non-parametric bootstrapping (1000 replications). We adjusted for baseline confounders (ethnicity, maternal age at first live birth) in a complete case sample (n=9,777). Sensitivity analyses examined bias from unmeasured intermediate confounding and attrition.

Results 10% children had borderline-abnormal CMH. The RR for the TE of SECs on CMHP was 1.79(1.58–2.04). Two thirds (66%) [0.50–0.81] of this was direct, i.e. not acting through MPD. Four percent (1.2–6.8%) was mediated (differential exposure), 28% (12.1–42.3%) was due to interaction (differential susceptibility), and 2% (0.6–4.3%) was from mediated interaction. Bias from unmeasured intermediate confounding and attrition appeared minimal.

Conclusion The direct effect of SECs on CMHP was large. Maternal psychological distress is also potentially important in the development of inequalities, predominantly due to differential susceptibility (and not differential exposure). Thus analyses which only consider mediating pathways may underestimate its role. Policies to improve MPD have the potential to reduce inequalities in CMHP. Future research to understand the factors that buffer advantaged mothers from the consequences of MPD may inform policy content and delivery.

OP107 HOW CAN WE MEASURE COMMUNITY RESILIENCE FOR POPULATION HEALTH? AN EVIDENCE SYNTHESIS FOR WHO EUROPE HEALTH EQUITY NETWORK

1,2JSouth*, 1RJones, 1,2JStansfield, 1AStagnall. 1School of Health and Community Studies, Leeds Beckett University, Leeds, UK; 2Health Improvement Directorate, Public Health England, London, UK

Background Resilience is a dynamic process of coping, adaptation and growth in response to threats and can be an attribute of individuals, communities or systems. ‘Creating resilient communities’ is a Health 2020 priority, reflecting the importance of the social environment as a determinant of population health. This is an emergent field for research, with questions of how best to define and measure this complex concept at a community level. This presentation reports on a rapid review and synthesis of measurement strategies conducted for WHO Europe Health Evidence Network (HEN). The review question was: ‘What quantitative and qualitative methods can be used to measure health-related community resilience at a national level?’

Methods The rapid review used HEN Evidence Synthesis guidance. A systematic search of academic and grey literature databases and 73 websites combined key terms for community resilience and measurement. Included languages were English, French and German, and Russian (via an independent search). Study selection was in 2 phases, with an initial focus on Europe. Inclusion criteria were articles that reported outcomes involving measurement of health-related community resilience in all population groups, study designs and settings. Studies on individual/system resilience and those not specifying health and wellbeing measurement were excluded. Data extraction fields included theoretical framework, methods and indicators. Findings were summarised in tables and a narrative synthesis.

Results In total, 3,753 publications were identified and following screening, 33 studies were included; 27 from WHO European Region. The map of literature showed various measurement frameworks in use, however most related to community disaster resilience. We grouped measurement strategies into:

i. Frameworks providing population profiles of resilience factors, using quantitative data
ii. Mixed method assessments incorporating stakeholder views, used mostly for local planning & evaluation
iii. Qualitative and participatory approaches, which involved marginalised communities.

There was a dearth of validated measures and insufficient evidence on national-level indicators, but socioeconomic measurement domains were categorised. Key methodological challenges were highlighted, including definitional issues, data aggregation and lack of attention to equity. Notwithstanding these challenges, the review identified some common principles for measuring community resilience.