

Latent class analysis (LCA) was used to identify classes of MHC, and children were assigned to the class they had the highest probability of belonging to. We investigated associations between MHC classes and child's physical health (healthy weight, overweight or obese, based on measured heights and weights, using International Obesity Task Force cut-offs; maternal report of unintentional injuries since age 7 [none, 1, 2+]) and poor mental well-being (low self-esteem [SE] and low life-satisfaction [LS] reported by the child; maternal report of child's emotional problems [EP], all dichotomised at the bottom decile of scores). Relative risk ratios (aRRR, 95% CI) and odds ratios (aORs, 95% CI) were used to examine three-category and binary outcomes respectively, adjusting for potential confounding. Survey weights accounted for sample design and attrition. Analyses were undertaken in Stata/SE 13.1.

**Results** Four classes were identified (ranging from high to low MHC): "High learning skills and high prosocial behaviour" (37%), "Moderate learning skills and high prosocial behaviour" (36%), "Moderate learning skills and moderate prosocial behaviour" (19%), and "Low learning skills and moderate prosocial behaviour" (8%).

Risks of 2+injuries were raised in "Moderate learning and high prosocial behaviour" (aRRR: 1.4 [95%CI:1.2–1.7]) and "Low learning skills and moderate prosocial behaviour" (aRRR: 1.4 [95%CI:1.1–1.9]) as compared to "High learning and high prosocial behaviour". Associations with MHC were absent or weak for single injury, overweight and obesity.

Compared to "High learning skills and high prosocial behaviour", odds of poor mental well-being were elevated for children from all other classes, with highest odds for "Low learning skills and moderate prosocial behaviour" (SE: aOR: 2.9 [95%CI:2.3–3.6]; EP: aOR: 4.2 [95%CI:3.4–5.1]; LS: aOR: 3.0 [95%CI:2.4–3.7]).

**Conclusion** Lower MHC, using a composite measure developed in a representative sample of UK children, was associated with injuries, low self-esteem and life-satisfaction, and emotional problems, but not overweight and obesity. Identifying and promoting MHC at the population-level may provide an opportunity to improve health in children and young people.

#### P42 "UNSEEN INJURIES": INVISIBILITY AND MENTAL ILLNESS IN THE ENGLISH WELFARE SYSTEM

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**Background** Research focusing on the impact of current welfare reform in England has identified that people with mental illnesses experience pronounced difficulties when accessing social security compared to those with other health conditions. This includes a disproportionate risk of being sanctioned, problematic assessments resulting from a system designed to focus on physical capabilities and a greater likelihood of being viewed as a fraudulent claimant. The impact of individual policies is useful evidence, however the existence of disadvantage across several aspects of this system may imply the presence of underlying mechanisms which need to be understood if further marginalisation is to be prevented. The perspective of individuals with mental illness has been largely omitted from this discussion and may provide useful insights into these

topics. The current study therefore aimed to explore the lived experiences of people with mental illness accessing housing and income benefits in England.

**Methods** Participants were recruited through five organisations offering support with social circumstances to people with mental illness in Leeds, England. Semi-structured interviews were completed with adults (n=11) accessing housing and income benefits, living independently in the community. Convenience sampling in conjunction with organisation staff was employed to recruit participants. The sample was comprised of participants with the following mental health issues: depression (n=8), anxiety (n=5), post-traumatic stress disorder (n=1), bi-polar affective disorder (n=1), psychosis (n=2), borderline personality disorder (n=1) and substance misuse (n=2) with several instances of co-morbidity. Data was interrogated using a six stage thematic analysis approach.

**Results** Accessing housing and income benefits can be problematic for people with mental illness due to the 'unseen' nature of these conditions. Barriers included being unable to provide evidence of illness to obtain financial support and the level of system flexibility in recognising the impact of mental health needs. Alongside this, participants encountered stigma from family, friends and the wider community rooted in the perceived validity of mental illness as a reason for claiming benefits. These themes were present across different types of mental health condition.

**Conclusion** These findings suggest that to create a social security system designed to be effective for people with a mental illness; changes are needed to the way in which mental illness is understood, assessed and monitored in this context. This study used a diverse but small sample in a localised setting and further research is needed to confirm these findings.

#### P43 THE ASSOCIATION BETWEEN DEPRESSION AND SUBSEQUENT HYPERTENSION—A SYSTEMATIC REVIEW AND META-ANALYSIS

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**Background** The possible causal association between depression and cardiovascular disease might be partly explained by an increased risk of hypertension. Several epidemiological studies have investigated the role of depression in the development of hypertension but the evidence is inconclusive. A previous systematic review of these studies has a number of shortcomings, including inappropriate pooling of different effect measures and lack of inclusion of all relevant studies. Additional primary studies have also been published since this earlier review was completed. Our aim was to identify, critically appraise, and synthesise evidence on the association between depression and subsequent hypertension.

**Methods** We performed a systematic electronic search in PsycINFO, Medline, and EMBASE to identify cohort or longitudinal studies reporting on the risk of hypertension among participants with versus without depressive symptoms and/or clinical depression. We restricted our search to articles published in English. We extracted information on study characteristics, methodology, and results using customised data extraction forms and assessed study quality using the SIGN checklist for cohort studies. We used Stata 14 to perform

random effects meta-analyses, to obtain summary effect estimates for the effect of depression on hypertension, pooling hazard ratios and odds ratios separately. We also separately combined studies which defined depression as a categorical or a continuous variable.

**Results** After de-duplication, the search identified 7402 studies. Twenty-two studies were eligible for inclusion in the review, 17 of which were included in the meta-analyses. Meta-analyses showed an increased hypertension risk among depressed versus non-depressed participants (pooled OR: 1.31, 95% CI: 1.05–1.64; pooled HR: 1.18, 95% CI: 1.02–1.36). Among studies which assessed depressive symptoms on continuous scales meta-analyses indicated an increased risk with every unit increase on the depressive symptoms scale (pooled OR: 1.06, 95% CI: 0.97–1.16; pooled HR: 1.06, 95% CI: 1.01–1.12).

**Discussion** Our review findings provide evidence that depression may be associated with an increased risk of hypertension. However, existing studies have important limitations and the substantial heterogeneity between studies included in two of the four meta-analyses remained unexplained after performing subgroup analyses. Before concluding that depression is indeed associated with an increased risk of hypertension, future prospective studies should improve the accuracy of exposure and outcome assessment, aim to take all major confounding and effect modifying factors into account, and present effect estimates for subgroups in order to help facilitate more meaningful meta-analyses of study findings. Further research is also needed to determine whether the observed association between depression and hypertension is causal.

**P44 SELF-HARM, VIOLENCE AND PREMATURE DEATH AMONG YOUNG PERSONS WHO EXPERIENCED TRAUMA-RELATED HOSPITALISATION DURING CHILDHOOD: A NATIONAL REGISTER-BASED COHORT STUDY**

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**Background** Epidemiological research has reported strong links between trauma-related hospitalisation and future risks of fatal and nonfatal adverse outcomes. However, some important research questions remain unanswered, including association with hospitalisation occurring specifically during childhood, longer-term follow-up from mid-adolescence through the earlier stages of adulthood, assessment of self-harm versus violence risks in the same study population, and absolute risk estimation. To reduce risk in young people, clinicians and public health experts require a better knowledge of subsequent pathways for individuals who experience trauma-related hospitalisation during childhood.

**Methods** This national cohort study examined n=1,087,672 persons born in Denmark 1977–1997 with complete linkage to national psychiatric, general hospital and crime registers. Survival analyses (© SAS Institute Inc.) was used to estimate incidence rate ratios (IRRs) for self-harm, violent criminality, interpersonal violence injury, and all-cause mortality between 15th and 35th birthdays among cohort members with and without trauma-related hospitalisation prior to 15th birthday. Accounting for competing risks, cumulative incidence

percentage values were estimated to age 35. Estimates were stratified by gender and by reason for hospitalisation during childhood: self-harm, interpersonal violence or accident.

**Results** Risk for each adverse outcome assessed was raised among young persons who experienced trauma-related hospitalisation at least once during childhood. Confounding by parental socioeconomic status, measured according to income, educational attainment and employment status, explained little of these risk elevations. Individuals hospitalised during childhood following self-harm or interpersonal violence had much higher risks for self-harm and violent criminality aged 15–35 years. Some particularly high cumulative incidence values were observed: subsequent violent offending in males hospitalised following interpersonal violence during childhood, 25.0% (95% CI 21.2–28.9); later self-harm in females hospitalised following interpersonal violence, 18.3% (95% CI 13.5–23.6) and following self-harm during childhood, 21.4% (95% CI 19.8–23.1). More frequent trauma-related hospitalisations, and hospitalisations for multiple trauma types at such an early age, conferred marked risk elevations through young adulthood.

**Conclusion** Although not all episodes of self-harm and interpersonal violence in the community are routinely captured via hospital records, trauma-related hospitalisation during upbringing may be a clinically useful marker for familial dysfunction and childhood distress that subsequently predicts internalised and externalised destructive behaviours among youths and young adults. Comprehensive national guidelines are needed to tackle the multifaceted vulnerabilities of children hospitalised for injuries or poisonings. Healthcare, social services and educational workers must provide particularly robust support to children hospitalised following self-harm or interpersonal violence, and those who experience multiple trauma-related hospitalisations during upbringing.

**P45 SOCIAL AND SPATIAL MOBILITY AND SELF-REPORTED HEALTH IN OLDER-AGE: LINKAGE OF THE SCOTTISH LONGITUDINAL STUDY TO THE 1947 SCOTTISH MENTAL SURVEY**

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**Background** The use of administrative datasets to create new cohorts with large sample sizes allows us to answer research questions that we previously could not. Linkage to historic datasets allows exploration of factors that may be important across the life course.

There is debate within the literature as to whether social mobility inflates or constrains health inequalities. The role of geographical mobility is unknown. We were interested in exploring how spatial and social mobility might impact on health in older age using linked administrative and cohort data.

**Methods** The 1947 Scottish Mental Survey (a 1936 birth cohort of 70 805 individuals with age 11 cognitive ability test scores) was linked to the Scottish Longitudinal Study (a semi-random sample of 5.3% of the Scottish population), and backward linked to the 1939 register to obtain parental occupation in 1939 (as a measure of social origin) and forward linked to