Adjusting for socioeconomic status revealed reduced ORs for mental health problems in the Pakistani group (girls 0.63, 0.41–0.99; boys 0.49, 0.27–0.89), as well as Black African boys (0.10, 0.02–0.38), Indian boys (0.40, 0.21–0.77), and Bangladeshi girls (0.18, 0.05–0.65), compared to their White peers. After adjusting for social support, participation, and adversity factors, significantly reduced odds for mental health problems remained only for Black African boys (OR 0.16, 0.04–0.72).

Conclusion Socioeconomic status (SES) confounds resilience factors against mental health problems apparent in young people from some ethnic minority groups. Despite greater socioeconomic disadvantage, there was reduced prevalence of mental health problems for these young people after adjustment for SES. Furthermore, the changes to ORs after adjusting for social support, participation, and adversity factors suggest ethnic inequalities in mental health outcomes in this sample could be partly explained by these social factors. Further analysis is needed to investigate mediating mechanisms operating here. Social interventions may help foster resilience in young people against mental health problems, irrespective of ethnicity.

**OP29** INTERACTION BETWEEN SOCIOECONOMIC POSITION AND SOCIAL INTEGRATION IN SUICIDE MORTALITY: A NATIONALLY REPRESENTATIVE COHORT STUDY

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Background A low level of social integration and lower socioeconomic position (SEP) are well-known risk factors for suicidal behavior. Most literature has suggested that the effects of family types as a proxy of social integration and SEP measures on suicide are merely additive. However, as social integration is not dependent on SEP, the association of these effects could be interactive. Since the protective effects of social integration vary by gender, so could this interaction. The aim of this study was to examine the interaction between social integration, SEP and gender on suicide mortality in the Canadian context.

Methods Using data from the 1991 Canadian Census Health and Environment cohort (CanCHEC) —which included 2.5 million Canadians over a 20-year follow up period — we applied Cox proportional hazards regression models to examine the association among living arrangements (lives alone versus single parent family versus others), education (secondary versus non-secondary), income (low income versus non-low income), and employment status (unemployed versus else) by gender. Models were developed to observe how living arrangements attenuated the association between SEP measures and suicide. In the full model, we added interaction terms between living arrangements and employment status.

Results In model 1, which was only adjusted for age and three SEP measures, both men and women with low income (Hazard Ratio (HR): 1.846 [women], HR: 1.278 [Men]) and who were unemployed (HR: 1.501 [Women], HR: 1.677 [Men]) were more likely to be exposed to completed suicide. In all models, lower education was associated with suicide risk among men, but not among women. In model 2, when living arrangements were added, the association between SEP measures and suicide was much attenuated among women, but not among men. In the full model, an interactive effect between unemployment and living arrangements (living alone) was not shown among men. However, there was a significant interactive effect for women, demonstrating that unemployed women who do not live alone were 1.429 times more likely to complete suicide than employed women living with others, but women living alone and unemployed were 2.125 times more likely to do so.

Conclusion While SEP had more independent impacts from social integration on suicide among men, there were significant synergistic effects on suicide mortality among women in Canada.
Further analysis is underway to explore which particular traits and characteristics of those who self-harm are most associated with risk of suicide using Cox regression in order to inform intervention targeting.

Thursday 5 September
Cancer 2

OP31 MEAT INTAKE AND CANCER RISK: PROSPECTIVE ANALYSES IN UK BIOBANK
10.1136/jech-2019-SSMabstracts.31

Background The latest meta-analysis from the World Cancer Research Fund/American Institute for Cancer Research concluded that red meat was a probable cause and processed meat a convincing cause of colorectal cancer. However, evidence for associations between red and processed meat intake and other cancer sites is limited. Furthermore, few studies have examined the association between poultry intake and cancer risk. Therefore, the aim of this study was to examine the associations between red, processed meat and poultry intake and incidence for 20 common cancer sites.

Methods We analysed data from 475,488 participants (54% women) in UK Biobank. Participants were aged 37–73 years and cancer free at baseline. Cancer diagnosis and death due to cancer during follow-up were determined using data-linkage with cancer and death registries (with follow-up until 30 November 2014 for England and Wales and until 31 December 2014 for Scotland, respectively). Information on meat consumption was based on a touchscreen questionnaire completed at baseline covering type and frequency of meat intake. We used multivariable-adjusted Cox proportional hazards models to determine the association between baseline meat intake and cancer incidence. Analyses of lung cancer risk were restricted to never smokers. All analyses were adjusted for socio-demographic, lifestyle and women-specific factors.

Results Over a mean 5.7 (SD 1.1) years of follow-up 23,117 participants were diagnosed with any type of malignant cancer. Red meat intake was positively associated with colorectal cancer (Hazard ratio (HR) per 50 g/day increment in intake 1.20, 95% Confidence Interval (CI) 1.02–1.41), breast cancer (1.13, 1.01–1.27) and prostate cancer (1.14, 1.00–1.29). Processed meat intake was positively associated with risk for colorectal cancer (HR per 20 g/day increment in intake 1.16, 95% CI 1.04–1.30). Poultry intake was positively associated with risk for malignant melanoma (HR per 30 g/day increment in intake 1.20, 95% CI 1.00–1.44), prostate cancer (1.11, 1.02–1.22) and non-Hodgkin lymphoma (1.26, 1.03–1.55).

Discussion Higher intakes of red and processed meat were associated with a higher risk of colorectal cancer. Red meat consumption was also positively associated with risk of breast and prostate cancer, but these associations are not supported by most previous prospective studies and may be affected by residual confounding. The positive associations of poultry intake with prostate cancer and non-Hodgkin lymphoma require further investigation.