

**P82 IS THERE A LINK BETWEEN MIGRANT DENSITY AND FOOD PURCHASES IN LOCAL AREAS? A CROSS SECTIONAL ANALYSES OF FOOD PURCHASES IN ENGLAND AND WALES**

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**Background** In the UK, migrants bring different cultural norms and eating patterns that contribute to the diversity of foods and consumers, which can be lost through a process of acculturation or shared with their host community. Previous studies have documented the transition in immigrants' 'healthy' eating habits towards 'unhealthy' habits, but the influence of immigration on the local-level host community's food habits is not well understood.

This study aims to examine the association between the local prevalence of immigrants born outside the UK and food purchasing patterns of households.

**Methods** Using a linkage of the UK 2012 Kantar fast moving consumer goods (FMCG) panel to the 2011 Census survey for England and Wales, descriptive and linear (complete-case) regression analyses were conducted on annual purchases of 11,457 regularly purchasing households.

The outcome was the proportion of energy (kilocalories) obtained from household purchases classed as 'healthier' using the Department of Health and Social Care Nutrient Profile model for high fat, sugar and salt content.

Immigrant density was defined as the proportion of non-UK born residents within a post code district (aggregated lower super output areas). Potential confounders that comprised individual (e.g. age, ethnicity of the main shopper), household (e.g. household size, income, education, tenure) and area-level confounders (e.g. weighted index of multiple deprivation score, migrant length of stay, region) were included in the adjusted model.

**Results** The analytical sample (24% of the 2012 panel) had an immigrant density that ranged between 2% and 63%. The mean proportion of 'healthier' calories purchased was 50% (range: 11 – 94%); the average household size was 3.

In the preliminary analyses of the data, the unadjusted models suggested an association between increasing migrant density and the purchase of healthier calories (Unadjusted model:  $p=0.003$ ; coefficients [95% confidence interval]: 0.023 [0.008 – 0.038]; adjusted  $R^2$ : 0.0007). However this association was not retained in the adjusted model, which found no association between migrant density and the purchase of 'healthier' calories in the panel (Adjusted model:  $p=0.246$ ; coefficients [95% confidence interval]: 0.012 [-0.008 – 0.032]; adjusted  $R^2$ : 0.049). There was some variation in the findings for sub-group analyses of migrant density by country of origin.

**Conclusion** There was no evidence of association between migrant density and the healthiness of household food purchases. The study was limited by the available data, operationalisation of migrant exposure and cross-sectional design. Future work will explore the nuanced relationship between clusters of immigrant characteristics and food purchasing patterns.

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**P83 SOCIAL DETERMINANTS OF INFLAMMATION: MODERATED MEDIATION OF THE RELATIONSHIP BETWEEN RACE-GENDER, INFLAMMATION, DAILY DISCRIMINATION, FINANCIAL STRAIN, AND EDUCATION**

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**Background** Disparities in chronic systemic inflammation among black and white women and men are well documented. However, while chronic stress domains such as discrimination and financial strain, as well as socioeconomic factors such as education, have all been linked to inflammation, more research is needed to clarify how these social determinants influence each other and contribute to inflammation. Guided by the Stress Process Model and Intersectionality, this present study assessed the mediating role of both discrimination and financial strain in the relationship between race-gender groups and inflammation (measured as elevated CRP levels). This research also examined if the potential indirect effects of discrimination and financial strain were contingent on the educational level of black and white men and women with the United States.

**Methods** This secondary analysis focused on an analytic sample (ages 25–74) of black and white men and women ( $n=775$ ) from the Midlife in the United States (MIDUS) Biomarkers Project (2004–2009). SPSS version 24 and PROCESS macro were used to test all mediation and moderated mediation analyses.

**Results** Separate mediation analyses revealed that after adjusting for age and when compared to the reference category (white men), both financial strain and daily discrimination mediated the relationship between race-gender (black men, black women, and white women) and inflammation (CRP levels). That is, self-identifying as a black man, white woman, or black woman positively influenced perceptions of both everyday discrimination and financial strain, which in turn contributed to increased levels of CRP. However, when both mediators were included in the mediation model, discrimination was only significant among black men. Results of the first moderated mediation analysis indicated that the indirect effect among black men on inflammation through *discrimination* was significantly stronger for black men educated beyond high school. Findings from the second moderated mediation analysis findings suggested that education significantly moderated the indirect effect of race-gender on inflammation through *financial strain*. While this indirect effect was stronger for black men and white women with a high school degree or less; conversely, the effect was stronger for black women with educational levels that exceeded high school.

**Conclusion** This study contributes to the literature on inflammation by further illuminating the social determinants and social patterning of inflammation among black and white women and men within the United States.