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| **Ethnic inequities in obesity – longitudinal trends by length of residence and immigrant ethnic group** |
| **Background/Objectives**Ethnic health disparities and obesity are key issues for policy makers, particularly in Australia where 28% of the population is born overseas and 2 in 3 adults are overweight or obese. Using obesity as the health outcome, this longitudinal study aimed to examine relationships between prospective trends in body mass index (BMI) and length of residence in Australia, and whether relationships varied by ethnic group. **Methods**The study used nine waves of data (2006 to 2014) from the Household Income and Labour Dynamics in Australia national panel survey. With an analytic sample of 4,583 individuals and 22,301 person-year observations, random effects modelling was used to assess average annual change in BMI by length of residence, for immigrants from seven ethnic groups (Oceania, North-West Europe, Southern and Eastern Europe, North Africa and Middle East, South East Asia, North East Asia, and Southern and Central Asia), controlling for demographic and socioeconomic factors.**Results**Over nine years, mean BMI increased for all immigrant groups. Length of residence was associated with the rate of change in BMI, with immigrants in the early-mid settlement periods (10-19 years residence) consistently having faster increases in mean BMI compared with immigrants living in Australia for longer (≥ 30 years). We also observed heterogeneity in the relationship between length of residence and BMI trends by ethnic group. While at baseline, immigrants who had lived in Australia the longest consistently had the highest mean BMI (> 25kg/m2 for most groups), the rate of weight gain varied and plateaued for some, but not all immigrant ethnic groups.**Discussion**Immigrants are not immune to bodyweight gain in Australia, and the early-mid settlement period is an opportunity for obesity prevention. Heterogeneity in weight gain by length of residence and ethnic group can be interpreted in different ways, such as with an individualistic acculturation frame, or with a broader social ecological frame. While the former is more common, I argue that the latter provides insight for policy makers into the fundamental causes of health inequity with increasing length of residence.**Keywords:** Inequity, ethnic minority, immigrant, obesity, acculturation, social determinants, Australia |