**The cumulative effect of perceived discrimination on the risk of Diabetes Type 2 and depression in multiple minority groups.**

**Introduction:** It is theorised that ongoing perceived discrimination, like any chronic psychological stress, can result in dysregulated physiological reactivity, increasing susceptibility to disease. Studies examining exposure to discrimination at only one point in time may underestimate the contribution of discrimination to poor physical and mental health. Numerous studies link the onset of Type 2 Diabetes Mellitus (T2DM) and depression to stress response. We examined the prospective association between cumulative exposure to discrimination in older multiple minority groups in the USA (>50 years old) and the likelihood of T2DM and depression onset.

**Methods:** Survey data from a 10-year Health and Retirement Study of Ageing (N ~ 18000) conducted in the USA was used. Perceived discrimination was measured at six equal 2-year intervals (2008-2018). The effects of the time-varying cumulative exposure to perceived discrimination on T2DM onset and depression were assessed. The Cox proportional hazards model with baseline (i.e., socioeconomic status) and time-dependent covariate (i.e., age) was used. The analysis was performed using WCE package in R.

dynamic pattern of perceived discrimination over time introduces a challenge when evaluating cumulative effects on health. In this study we used WCE

**Results:** In older women (HR = 2.52, 95%CI: [2.23; 3.01], *p*<0.001), individuals born outside US (*HR* = 4.05 95% *CI*: [3.01; 5.70], *p*<0.001), and obese individuals (*HR* = 2.04, 95% *CI*: [1.52; 2.82], *p*<0.001) everyday cumulative discrimination in a form of being treated with less respect due to their gender, national origin and weight, respectively, increased the risk of T2DM onset. Everyday cumulative discrimination in medical settings attributed to race and gender respectively increased the risk of T2DM onset in black (*HR* = 1.67, 95% *CI*: [0.73; 3.64], *p*<0.01) and female individuals (*HR* = 3.39, 95% *CI*: [2.65; 3.76], *p* <0.001).

Similarly, intersectional everyday discrimination affecting black women resulted in significant increase of T2DM risk (*HR* = 2.25 95% *CI*: [0.82; 5.79], *p*<0.05).

In women, everyday discrimination resulted in a significantly increased risk of depression (*HR* = 2.52, 95% *CI*: [2.01; 3.56], *p*<0.001). In ethnic minorities, perceived discrimination experienced as rarely as once a year significantly increased the risk of clinical depression (*HR* = 2.68, 95% *CI*: [2.18; 3.40], *p*<0.001). Similarly, weight-related perceived discrimination cumulatively affected the risk of clinical depression onset in obese individuals even when experienced a few times a year (*HR* = 2.75, 95% *CI*: [2.07; 3.29], *p*<0.001).

**Conclusion:** Everyday discrimination attributed to gender, race, national origin, and weight increases the risk of T2DM. Black women are particularly vulnerable to the negative impact of discrimination manifesting in an increased risk of T2DM. Even infrequent race discrimination increased the risk of depression in ethnic minorities, and infrequent weight-based discrimination increased the risk of depression in obese individuals. There is a need to combat discrimination as a psychosocial phenomenon, among other proposed systemic changes targeted at reducing health inequalities. This suggests that besides economic policies and legislation, there is a need for policies informed by research on psychosocial determinants of health, including interpersonal discrimination.