Background

Disability and poor physical function have major impacts on the health and well-being of ageing populations. Poor oral health (tooth loss, periodontal (gum) disease, dryness of mouth) are also very common health problems in older populations, and adversely impact nutrition and quality of life. Studies suggest that poor oral health in older age is associated with disability, however most studies have limited oral health measures. We investigated the association of a range of objectively and subjectively assessed oral health markers with disability and physical function in two population-based studies of older people in the UK and USA.

Methods

Cross-sectional analyses were conducted in the British Regional Heart Study (BRHS) comprising men aged 71–92 (n=2147) from 24 British towns, and the US Health, Aging and Body Composition (HABC) Study comprising men and women aged 71–80 (n=3075). Assessments included objective measures of oral health (periodontal disease, tooth count), and subjective measures (dry mouth, self-reported oral health, dental service use), and disability [mobility limitations, Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL)], and physical function (grip strength, gait speed, chair stand test). Logistic regression models, adjusted for confounding variables, were used to examine the associations between oral health and disability and physical function.

Results

In the BRHS, dry mouth, tooth loss, and cumulative oral health problems were associated with greater risks of mobility limitations, problems with ADL and IADL; these remained significant after adjustment for confounding variables (for ≥3 dry mouth symptoms, odds ratio (OR)=2.68, 95%CI=1.94–3.69; OR=1.76, 95%CI=1.15–2.69; OR=2.90, 95% CI: 2.01, 4.18, respectively). Similar results were observed in the HABC Study for mobility limitations and ADL (for ≥3 oral health problems, OR=2.19, 95%