Background: OA is highly prevalent in the UK general population, particularly in adults ≥50 years of age. Numerous epidemiological studies have estimated the population prevalence of OA at joint sites such as the hands, hips and knees, while fewer studies are available for the foot. It is commonly assumed that OA occurs less frequently in the ankle than in these other joint sites, although there are no published estimates of the prevalence of symptomatic radiographic ankle OA in the general population. The aim of this study was to calculate prevalence estimates for ankle pain and symptomatic, radiographic ankle OA within a general population of community-dwelling older adults and to examine their distribution according to age, gender and socio-economic status.

Methods: Participants ≥50 years of age and registered with one of four general practices in North Staffordshire were mailed a health questionnaire and invited to take part in the Clinical Assessment Study of the Foot (CASF). Participants reporting pain in or around the foot in the past 12 months and consenting to further contact were invited to attend a research clinic where weight-bearing, antero-posterior and lateral ankle radiographs were obtained. A single blinded reader scored osteophytes and joint space narrowing (JSN) on a scale of 0–3 on each view using an atlas of standardized radiographic features. Ankle pain in the previous month was determined by a foot and ankle pain manikin. Symptomatic radiographic ankle OA was defined as grade ≥2 for osteophytes or JSN on either view together with the presence of ankle pain in the past month in the corresponding ankle. Individuals could have one or both ankles involved. Prevalence estimates for ankle pain and symptomatic radiographic ankle OA were calculated using multiple imputation to account for missing radiographic or pain data due to clinic non-attendance or incomplete data collection and weighted logistic regression was used to adjust prevalence for participants’ likelihood to return the initial health survey questionnaire. Estimates were stratified by age, gender and socio-economic status.

Results: In total, 5109 participants responded to the baseline health survey questionnaire (adjusted response 56%) and 560 participants attended the research clinic. After exclusion of inflammatory arthritis (n = 24), prevalence was estimated to be 11.7% (95% CI 10.8, 12.6) for ankle pain and 3.4% (95% CI 2.4, 4.3) for symptomatic radiographic ankle OA. Stratification found that females, younger adults (50–64 years) and individuals with routine/manual occupations demonstrated slightly higher prevalence estimates.

Conclusion: Ankle pain was common in a population of community-dwelling older adults, whereas symptomatic radiographic ankle OA occurred less frequently, suggesting that diagnoses other than OA should be considered in older adults presenting with ankle pain. Future research should explore risk factors for ankle pain and symptomatic radiographic ankle OA to help explain the patterns in prevalence observed in this study.

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