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# Health inequalities among older men and women in Africa and Asia: evidence from eight Health and Demographic Surveillance System sites in the INDEPTH WHO-SAGE Study

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## Abstract

Background: Declining rates of fertility and mortality are driving demographic transition in all regions of the world, leading to global population ageing and consequently changing patterns of global morbidity and mortality. Understanding sex-related health differences, recognising groups at risk of poor health and identifying determinants of poor health are therefore very important for both improving health trajectories and planning for the health needs of ageing populations.

Objectives: To determine the extent to which demographic and socio-economic factors impact upon measures of health in older populations in Africa and Asia; to examine sex differences in health and further explain how these differences can be attributed to demographic and socio-economic determinants.

Methods : A total of 46,269 individuals aged 50 years and over in eight Health and Demographic Surveillance System (HDSS) sites within the INDEPTH Network were studied during 2006-2007 using an abbreviated version of the WHO Study on global AGEing and adult health (SAGE) Wave I instrument. The survey data were then linked to longitudinal HDSS background information. A health score was calculated based on self-reported health derived from eight health domains. Multivariable regression and post-regression decomposition provide ways of measuring and explaining the health score gap between men and women.

Results: Older men have better self-reported health than older women. Differences in household socio-economic levels, age, education levels, marital status and living arrangements explained from about 82% and 71% of the gaps in health score observed between men and women in South Africa and Kenya, respectively, to almost nothing in Bangladesh. Different health domains contributed differently to the overall health scores for men and women in each country.

Conclusion: This study confirmed the existence of sex differences in self-reported health in low- and middle-income countries even after adjustments for differences in demographic and socio-economic factors. A decomposition analysis suggested that sex differences in health differed across the HDSS sites, with the greatest level of inequality found in Bangladesh. The analysis showed considerable variation in how differences in socio-demographic and economic characteristics explained the gaps in self-reported health observed between older men and women in African and Asian settings. The overall health score was a robust indicator of health, with two domains, pain and sleep/energy, contributing consistently across the HDSS sites. Further studies are warranted to understand other significant individual and contextual determinants to which these sex differences in health can be attributed. This will lay a foundation for a more evidence-based approach to resource allocation, and to developing health promotion programmes for older men and women in these settings.

Access the supplementary material to this article: INDEPTH WHO-SAGE questionnaire (including variants of vignettes), a data dictionary and a password-protected dataset

(see Supplementary files under Reading Tools online). To obtain a password for the dataset, please send a request with 'SAGE data' as its subject, detailing how you propose to use the data, to [global.health@epiph.umu.se](mailto:global.health@epiph.umu.se)

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