

The health and well-being of older people in rural South Africa

Xavier Gómez-Olivé, Specialist in Public Health and Research Manager at the MRC-Wits Rural Public Health and Health Transitions Research Unit, Agincourt HDSS, School of Public Health, University of the Witwatersrand. Research area of interest: “Adult Health, Ageing and Wellbeing” and “HIV and non-communicable diseases and their management in Primary Health Care”. xavier@agincourt.co.za

The challenge of an ageing population

The rapid ageing of the world’s population is presenting new challenges to all countries, but most of all to those countries least able to meet that challenge. The percentage of the world’s population aged 65 years or more is projected to increase steeply in coming years (1), and morbidity and mortality due to the chronic diseases associated with ageing are taking an increasing toll worldwide. The WHO has estimated that 60% of the 58 million deaths in the world in 2005 were due to chronic diseases and 80% of those occurred in developing countries, equally affecting men and women (2). In recognition of the situation, the General Assembly of the United Nations made a declaration in 2011 recognising “*the double burden of disease, including in Africa, with a rising incidence of non-communicable diseases, which are projected to become the most common causes of death by 2030*” (3).

South Africa is not exempt from this challenge. The proportion of the population aged 60 years and over is predicted to increase from 3.5% in 2006 to 4.8% in 2030 (1), and the increasing burden of chronic disease is already evident. Last September, many South African health and population experts participated in a South African Summit on the Prevention and Control of Non Communicable diseases, making a declared commitment to the control of non-communicable diseases in the country “*to reduce the incidence and mortality from non-communicable diseases*” including interventions aiming to reduce premature mortality under 60 years of age from non-communicable diseases; to reduce tobacco and alcohol use; to reduce salt intake; to reduce the percentage of people obese or overweight; to increase the people controlled for hypertension, diabetes and asthma, among other interventions (4).

Chronic diseases of ageing in the Agincourt population

The MRC/Wits Rural Public Health and Health Transitions Research Unit – Agincourt Health and Demographic Surveillance System (the Agincourt HDSS) is based in Bushbuckridge, Mpumalanga, where the research unit has been running an annual census of around 70,000 people for twenty years. Births, deaths and migrations are recorded and, by verbal autopsy, causes of death. Additional modules focus on specific social, health and economic aspects. Before 1993 the Agincourt area received a high number of refugees from Mozambique who have some socio-economic differences with the local South African population. The HDSS structure enables longitudinal data to be used to provide insights into trends in health and the impact of social and economic changes on the population’s health (5).

Studies carried out in the Agincourt sub-district from the 1990s were already uncovering the emerging problem of the chronic diseases of ageing problem, when stroke was found to be an important cause of death, with a mortality rate of 107/100 000 in the period 1992-1995 in the population 35 to 74 years old (6). In a subsequent study we found that the Agincourt area also

had a surprisingly high proportion of people who had survived a stroke and were living with the effects, many of them requiring help with everyday living (7). At the same time we demonstrated that there was a high prevalence of hypertension among all adults and of obesity among women (8).

Given these results, and the expected increase of chronic diseases as the health and epidemiological transitions take place in this rural setting, the Agincourt HDSS decided to focus an area of research on older people and their wellbeing. One important outcome was a collaborative study with WHO and the INDEPTH network investigating the health situation of older people and the factors associated with poor health, functionality, or quality of life. The multi-site Study on Global Ageing and Adult Health (SAGE) (9) included five African and five Asian countries, using standardised questionnaires to allow comparisons between countries. In the Agincourt site we concentrated on self-reported health, functionality, quality of life and well-being of the population aged 50 years old or older, using WHO derived measures for quality of life (WHOQoL), functionality (WHODAS: Disability Assessment Schedule) and health status (10).

We aimed to include everyone aged 50 and over and resident in the research site, and carried out the interviews during the 2006 annual census when trained field workers visited the people in their homes. We had a 68% response rate, but only 1% refused to respond; the main reason for an interview not taking place was that the person was not at home, despite field workers making up to three visits to find people at home. The participants had a mean age of 66.6 (SD 10.6), and 75.2% of them were women, reflecting gender distribution in the general population in this rural setting. Less than half of the population were in a current partnership (45.6%) and nearly two thirds (65.8%) had no formal education. Women were significantly younger, more often single, less formally educated and had lower socio-economic status. To explore potential associations with quality of life, functionality and self-reported health status we carried out logistic regression analysis.

What factors are associated with self-reported health, functionality and quality of life?

After adjusting for possible confounding factors, we found some important predictors of low self-reported health status. Not surprisingly, the strongest association was with age. People aged 80 and over were more than twice as likely to report poor health (OR 2.59, 95% confidence interval (CI) 1.97 – 3.40). Other important factors were gender (women were 30% more like to report poor health), education (those with no education were 42% more likely to report poor health), marital status (those not currently living in partnership were 18% more likely to report poor health) and being in employment (those not working were 29% more likely to report poor health). Interestingly, former refugees with a Mozambican origin were 24% less likely to report poor health status.

We had similar findings from logistic regression models examining factors related to a poorer WHODAS score, indicating poor functional ability, and a poorer measure of quality of life (WHOQOL). Older people were 3 times more likely to report poor functionality, as were women (38% more likely), those with no education (57% more likely), those who were single (25% more likely) and those not working (33% more likely). In a logistic model for factors associated

with quality of life the variables associated with reporting lower quality of life were being in the older age group (35%), having no education (39%), being single (28%); living in a household with a low asset score (52%) and not working (32%).

The determinants explained

It is not at all surprising that getting older was related to poorer health and poorer functionality. However, the relationship between age and quality of life is less strong, although in a similar direction; suggesting that many older people are still experiencing a good quality of life despite their deteriorating health and functionality. Lack of education is well known to be related to poor health outcomes and we have again demonstrated that.

Quality of life was the only measure to show an association with level of household assets (an indirect way of measuring socio-economic status), indicating that the perception of quality of life may be related more to economic capacity and expectations rather than to health and physical and social function. Although increasing age showed linear progression with poorer health status and functionality, the relationship was different for quality of life, where there was no difference between those aged 60-69 years old and the younger group aged 50-59 years old. Research currently in progress in Agincourt HDSS indicates that this may be related to age of receiving the old Age pension. People in their sixties are more financially secure and better able to fulfil their social role of care givers.

There are some remarkable gender differences that do not have a clear explanation. Women report lower health status and functionality than men but not a lower quality of life. Quality of life is better explained as satisfaction with one's day to day life, while health status and function are more related to physical capacity to perform one's daily tasks. There are several possible explanations. Older women may retain a caring role in the household and the wider community, while men may find they have lesser role once they are unable to make a financial contribution to the household. The gender paradox, where women report poorer health and more long term limiting conditions but nevertheless enjoy a longer life expectancy has been described many times, but not yet explained.

Implications for South Africa

The high levels of hypertension and stroke that is present in an area together with an estimated high prevalence of HIV in adults is creating what has been called the double burden of disease (11). With the roll-out of antiretroviral treatment in the area since 2007, we can expect to see an increase in survival in HIV infected population, leading to a new demand for chronic care in long-term users of antiretrovirals. South Africa is in the middle of a demographic and epidemiological transition with an increasing ageing population. Cardiovascular diseases, diabetes, mental health and other diseases are expected to increase, together with the epidemic of HIV and tuberculosis. All these conditions need chronic care at Primary Health Care level. An integrated chronic care system with functioning health facilities and good community health workers to identify and follow those in chronic care is urgently needed. In the Agincourt HDSS, we have been working to describe the prevalence of the main chronic health conditions that will require medical and community attention as well as their burden in the Primary Health Care. We

now intend to move on to design some strategies to support a successful implementation of the new Primary Health Care re-engineering plan.

Note that the views expressed in this article are those of the author(s) and do not necessarily represent the views of PHASA.

References:

1. Velkoff VA, Kowal PR. Population Aging in Sub-Saharan Africa: Demographic Dimensions 2006. US Census Bureau, Current Population Reports; 2007.
2. World Health Organisation. Preventing chronic diseases - a vital investment. Geneva: World Health Organisation; 2005.
3. UN General Assembly. Political declaration of the High-level Meeting of the General Assembly on the Prevention and Control of the Non-communicable diseases. 16th September 2011. http://www.un.org/ga/search/view_doc.asp?symbol=A/66/L.1 Accessed 22 April, 2012.
4. South African declaration on the Prevention and Control of Non-communicable diseases. 12-13 September 2011. http://www.health.uct.ac.za/usr/health/research/groupings/cdia/downloads/SA_NCD_Declaration.pdf Accessed 22 April, 2012.
5. Kahn K, Tollman SM, Collinson MA, et al. Research into health, population and social transitions in rural South Africa: data and methods of the Agincourt Health and Demographic Surveillance System. *Scand J Public Health Suppl.* 2007; 69: 8-20.
6. Kathleen Kahn, Stephen M. Tollman. Stroke in rural South Africa - contributing to the little known about a big problem. *S Afr Med J.* 1999; 89(1): 63-5.
7. Connor MD, Thorogood M, Casserly B, Dobson C, Warlow CP. Prevalence of stroke survivors in rural South Africa: results from the Southern Africa Stroke Prevention Initiative (SASPI) Agincourt field site. *Stroke.* 2004; 35(3): 627-32.
8. Thorogood M, Connor M, Tollman S, et al. A cross-sectional study of vascular risk factors in a rural South African population: data from the Southern African Stroke Prevention Initiative (SASPI). *BMC Public Health.* 2007; 7: 326.
9. Kowal P, Kahn K, Ng N, et al. Ageing and adult health status in eight lower-income countries: the INDEPTH WHO-SAGE collaboration. *Glob Health Action.* 2010; 3(Supplement 2): 11-22.
10. Gomez-Olive F, Thorogood M, Clark BD, Kahn K, Tollman SM. Assessing health and well-being among older people in rural South Africa. *Glob Health Action.* 2010; 3(Supplement 2): 23-35.
11. Mayosi BM, Flisher AJ, Lalloo UG, Sitas F, Tollman SM, Bradshaw D. The burden of non-communicable diseases in South Africa. *Lancet.* 2009; 374(9693): 934-47.