Commentary


Carol Jagger

Department of Health Sciences,
University of Leicester, England.

At the start of the 21st century, developing countries are experiencing the fall in infectious diseases and fertility and the increasing numbers of older people that developed countries were experiencing a century before. If these were the only factors that determined the aging of a population, it would be easy to project the future and plan accordingly. Unfortunately, the factors that impact on the process of aging are complex and multifarious. Disease experience, lifestyle, habits, sociodemography, as well as geography, culture, wealth, and health service delivery and infrastructure all contribute, both positively and negatively, to aging.

Loss of functional capacity and disability is a prime concern with population aging, in terms of demands on health and social care services, family, and indeed the older person himself or herself. Robine and Michel (1) focus on this aspect in their proposal for a general theory of population aging and this would seem a good starting point, given that many of the factors described as contributing to general aging are implicated in functional decline at older ages both in theoretical models of disablement (2) and in systematic reviews of evidence (3).

The purpose of a general theory on population aging is not only to describe where we are in the process but also to learn how we might “interfere” with the process and slow it down. Verbrugge and Jette (3) differentiate between extraindividual factors, intraindividual factors, and risk factors that impact on the main pathway to disablement. Factors external to the individual, at a population or societal level, include availability and use of medical care, which, in turn, includes drugs, availability of personal assistance and equipment, day and respite care, and structural modifications and access to transport and facilities as well as factors at a community or governmental level such as policies on income, education, transportation, and employment.

Many of the risk factors impacting further down the disablement process, on declining function, are also risk factors for specific diseases. Diet, physical activity, alcohol use, and smoking are all potentially modifiable influences and could help maintain health at older ages and delay the onset of frailty (4,5). However, the extent to which health promotion measures will be or can be taken up by older people is still questionable. Southern Europeans not only report lower levels of physical activity but also believe less in the need for exercise compared to their Northern European counterparts.

Yet, it is Northern European countries such as Finland where there has been widespread health education and interventions on such benefits, particularly for cardiovascular health (6). Older people themselves have been reported as having the ageist view that participating in vigorous activities is less socially acceptable with increasing age and such views are often reinforced by the rest of society (7). Even if such views are not held, the decisions by individuals to change lifestyles are made within the context of wider individual and societal factors, namely, income, education, and availability of and access to suitable programs.

The process of population aging, or indeed functional decline, might be viewed as a multidimensional “surface” with the factors at play, including time, as dimensions. Each study that is undertaken is then a single point on the surface. When seen in this light, it is not surprising that, despite a large number of studies from many countries worldwide, we have little idea of what the true underlying surface looks like, given that few studies take the same value on more than one dimension.

An added difficulty in seeing the whole picture is the variety of methods used in studies to measure functional decline (3). As with the impossibility of combining results on different outcome measures in meta-analyses, harmonization of the measures has been a key concern for the comparability of health expectancies. However, recent progress has been made to create a comparable set of instruments to measure different facets of health across Europe (8). At the heart of this exercise has been the rigorously standardized translation to the underlying health concept, in order to ensure not simply a correct literal translation of the item, but a translation that can capture the linguistic and cultural differences in the way facets of health are understood as well as the way information can be acceptably gathered. There is no reason why such concepts cannot be more widespread than Europe.

Randomized controlled trials are deemed to give us the best evidence of the effectiveness of treatments and interventions because the process of randomizing balances confounding factors that get in the way of our seeing the true effect of the treatment on a population. Unfortunately, systematically controlling all the factors at play in a natural process, such as aging, is impossible. One way forward is to try to fit together the evidence from the current comparable worldwide literature and by designing future studies that
attempt to “control” for some of the variability. Much like we proceed with a jigsaw, international comparisons of centenarians and supercentenarians, of how and when these populations have emerged and the contributions of the birth and death processes in their evolution, can add much to our knowledge of the “edges” of population aging (9). A regularly conducted International Aging Survey using truly comparable measures on a carefully selected set of countries, chosen for their similarity and variability across a range of the important factors, should help us to fill in more of the missing picture.

Address correspondence to Carol Jagger, Department of Health Sciences, University of Leicester, 22-28 Princess Road West, Leicester, England LE1 6TP. E-mail: cxj@le.ac.uk

REFERENCES