a combination of differences among the birth cohorts adopting high smoking levels and an interaction of this variable with exposure to atmospheric pollution. Inadequate data are available to fit a model that allows for such a combination of risk factors, and the authors argue that the simpler smoking effect model used for lung cancer does not fit the trends in bronchitis mortality in either males or females. Their projections for males extrapolate the substantial declines in mortality since 1951 for all age groups, resulting in an approximate halving of the mortality rate. In great contrast, for female mortality no change in the 1980s age-specific rates is assumed.

The article concludes with a short review of the current theoretical debate concerning relationships between morbidity and mortality. Its main value, however, is the summary presentation in a relatively accessible form and title of the technical forecasting and actuarial calculations and debates which variously inform and alarm government planners and spending departments.

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Education

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Gilbert J. Leclerc, Understanding the Needs of Older Adults: a New Approach. Educational Gerontology, 11 (1985), 137-144; R. David Owens, Nature and Amount Learned by Older Adults, from a Documentary Program. Educational Gerontology, 11 (1985), 9-28; Mary M. Seguin and Polly F. McConney, Team Building and Older Volunteers, The Journal of Volunteer Administration, 3 (Spring 1985), 3, 39-46.

Three recent papers from North America link together issues of educational need, informal educational sources and the notion of team-based education and training in the development of opportunities for older volunteers. Each topic links directly to issues currently under debate in the field of learning opportunities for older people in the United Kingdom.

A new approach to educational needs assessment of older adults is described by Gilbert J. Leclerc. In terms of educational theory the hypothesis which the study sought to test was the idea that educational need is dictated more by an awareness of gaps and shortcomings in life rather than by physical circumstance. Twin assumptions underpin the study. The notion that learning abilities do not deteriorate with age,

but decline if not used regularly or if an individual has a negative image of his or her intellectual capacities, is matched by the view that learning and personal development late in life characterised by a search for new meanings, new modes of expression and new objectives. The research was carried out in the Sherbrooke area of Quebec with 103 older adults selected from the 471 members of five Clubs d'âge d'or, a confederation of groups of older adults mainly involved in social and cultural activities. The average age of the sample was 65 and two-thirds were women.

The research proceeded through two phases. In phase one during a number of interviews the subjects were invited to write down the advantages and disadvantages of being an older adult, then to identify major educational needs through a process of group and plenary discussion. The second phase involved setting up a small committee comprising two elders, the director of Les Clubs d'âge d'or, three university professors and the researcher who led the group.

Advantages in growing old included greater individual freedom and choice and time to be spent with other people, freedom from financial problems as well as greater maturity and wisdom. Disadvantages were identified as loss of physical strength and fitness, loneliness, rejection, lack of motivation for long-term projects, lack of money and need for new identity and new social roles. Translated into educational needs these became ways of making new friends, ageing well, coping with social changes, gaining confidence, learning group membership skills and volunteer roles and establishing good interpersonal relationships. And the programme which emerged covered topics which ranged from health, nutrition and fitness to tackling personal, sexual, economic, psychological and collective organisational issues in the lives of older people.

This particular approach to understanding educational need begins with a process of identifying gaps between experience and aspirations in discussions focusing on advantage and disadvantage, and through groupwork arrives at a shared understanding of priorities in needs. It is argued that this process enables the rediscovery of personal and social identity, itself a dominant need in the lives of older people.

Television is arguably a major educational influence in the lives of older people. The television documentary, in particular, is designed to inform viewers in depth, usually about a particular topic. Evidence suggests that documentary programmes teach through incidental learning rather than by direct instruction. In the light of research already carried out into the learning processes linked to documentary viewing and with the knowledge that older people spend more time in

absolute and proportional terms viewing television, a research project was designed to discover what people over the age of 50 learn from a documentary programme.

The researcher used a domain-reference test which was based on a content analysis devised to yield information on reactions to main ideas and subordinate content in the documentary viewed. Those involved in the research were a sample of 87 people over the age of 50 and recruited on a volunteer basis in the Port Charlotte and Tallahassee areas of Florida. The ratio of women to men in the sample was roughly two-to-one and the normal age distribution meant that 80 per cent were within the 60–75 age bracket. Educational levels were higher than for the average older American, 47 per cent had attended college or graduate school.

The documentary The Xinguana: Aborigines of South America was chosen for the study on the grounds that it was intended for a general audience, was likely to interest older adults and was suitable for the method of content analysis chosen. The programme lasted 29 minutes after which participants were, immediately afterwards and without prior knowledge, asked to answer a number of questions relating to identified main and subordinate ideas. The tests took place in a Cultural Centre and Public Library and took 90 minutes in all.

The results showed that participants were able to recall a higher proportion of main ideas (60%) than subordinate ideas (51%), but were able to recognise a higher proportion of subordinate ideas (56%) than main ideas (51%). Discussing the outcomes of the tests, the author concedes the limited possibilities for generalising, given the test conditions, the group tested and the short time period involved. He does, however, suggest that levels of learning performance could be raised if documentary producers paid attention to the need for learning instructions and for changes in the written narrative which encouraged older learners to respond to questions based on the content of the documentary. Future research might look at more varied groups of older learners in their home settings as well as include an analysis of the particular features of documentaries in terms of images, words and content.

Educational opportunities which link to some kind of vocation in old age are few enough. The Andrus Gerontology Center at the University of Southern California included 184 volunteers in a project to further the development of new roles for retired people as well as the work of the centre. The programme is 'for' and 'by' older people and volunteers are involved in both multi-generational and peer teamwork.

Betty Seguin and Polly McConney evaluate the processes of team-

building and team-management amongst older volunteers. They describe models of peer teamwork based on sharing skills and responsibilities equally, rotating responsibilities, pairing experienced and less experienced team members and building the means to management and assessment. This process not only requires clear statements as to goals and responsibilities, it also implies a training and educational approach towards issues such as the relationship between paid and unpaid workers, awareness of the skills and experience of older volunteers and more specific topics relating to health concerns. The Andrus Volunteers were involved at all points, as lecturers, group leaders and at an individual interpersonal level. The authors argue that at a time of diminishing resources many organisations, both private non-profit and governmental need volunteers. A teamwork approach enables the recruitment and training of peers who can then work on projects, with younger paid personnel, useful to such organisations.

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