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Cross-cultural comparison between academic and lay views of healthy ageing: a literature review

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ABSTRACT
The aim of this study is to specify the concept of 'healthy ageing' from both western and non-western cultural perspectives, and to compare the views of academics and lay older people. Thirty-four published peer-reviewed full papers in English and Chinese (traditional characters) were identified using electronic database searches. The key components of their definitions of healthy ageing were extracted and categorised into 12 domains. The results show that, in general, lay definitions (as described in 11 studies) included more domains (independency, family, adaptation, financial security, personal growth, and spirituality) and more diversity in the healthy ageing concept than academic views (which tend to focus more on physical and mental health and social functioning in later life). Certain domains were valued differently across cultures. As shown in previous studies, the findings affirm that healthy ageing is a multi-dimensional and complex concept and that there are substantial differences in different cultures. Moreover, we found that there are pronounced variations in the conceptualisation of healthy ageing as between academic and older lay people. Generally, older lay people perceive healthy ageing more broadly than the maintenance of physical, mental and social functioning. We suggest that academic researchers should integrate the more holistic perspectives of older lay people and cultural diversity into the classical 'physical–mental–social' healthy ageing concept.

KEY WORDS – healthy ageing, successful ageing, ageing well, cross-cultural, academic views, lay perspectives, quality of life, literature review.

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Introduction

'Healthy ageing' has become a major concern given current and prospective demographic changes. It is well established that population ageing is occurring in almost all world regions (World Health Organization (WHO) 2008), and that projections of rising health-care and long-term care costs have prompted more and more national governments to adopt 'healthy ageing' policies ('healthy ageing' is used in this paper to represent also the various cognate concepts such as 'successful ageing', 'active ageing', 'positive ageing', 'robust ageing' and 'ageing well'). These policies aim not only to prolong the duration of later life, but also to improve the quality of life of older people (Hansen-Kyle 2005; Peel 2004). What exactly does 'healthy ageing' mean? Does it refer merely to longer life expectancy with relatively intact physical, mental and social functioning, or to better active life expectancy, or is it an expression for a good quality of life in old age? Is 'healthy ageing' a 'state of mind' or a 'dynamic adaptation process'? (Bowling and Dieppe 2005; Depp, Glatt and Jeste 2007; Peel 2004). So far and despite decades of academic studies in different disciplines, such as geriatrics, psychology, sociology and gerontology, no consensual definitions or operational criteria for 'healthy ageing' exist and few of the definitions have been well explicated (Bowling 2006, 2007; Depp and Jeste 2006; Phelan *et al.* 2004). Furthermore, culturally-sensitive definitions of health ageing have not yet been fully explored (Uotinen, Suutama and Ruoppila 2003).

Geographically, the 'aged countries' (defined by the United Nations Organization as countries where people aged 65 or more years constitute at least 7 per cent of the population) and countries where people have life expectances at birth over 70 years, are mainly situated in the western world with a few in (East) Asia (WHO 2008). Accordingly, most of the published research about definitions or concepts of healthy ageing have been conducted in these areas: North America (*e.g.* Berkman *et al.* 1993; Burke *et al.* 2001; Ford *et al.* 2000; Garfein and Herzog 1995; Guralnik and Kaplan 1989; Palmore 1979; Phelan *et al.* 2004; Reed *et al.* 1998; Roos and Havens 1991; Rowe and Kahn 1997; Strawbridge *et al.* 1996; Tate, Lah and Cuddy 2003; Tyas *et al.* 2007; Valliant and Western 2001), Western Europe (*e.g.* Avlund *et al.* 1999; Baltes and Baltes 1990; Bowling 2008; Bowling and Iliffe 2006; von Faber *et al.* 2001), and Australia (*e.g.* Almeida *et al.* 2006; Knight and Ricciardelli 2003). Only a handful of studies have focused on (East) Asia (Chou and Chi 2002; Hsu 2007; Hsu and Chang 2004; Lamb and Myers 1999; Li *et al.* 2006; Matsubayashi *et al.* 2006). Hardly any healthy ageing studies have been conducted in other parts of the world, such as Africa. As similar demographic ageing trends occur in

the rest of the world, especially in Asian countries (WHO 2008), it becomes increasingly important for these areas to conceptualise and understand healthy ageing from their own cultural perspectives, as their concerns might be different from the established western views. It would be very informative to compare these studies to see if there exist any similarities or differences on healthy ageing concepts from different cultural perspectives.

Moreover, many current definitions of healthy ageing reflect only the academic point of view. Only a few published studies have considered the older people's own views of healthy ageing (Bowling 2006, 2008; Fernández-Ballesteros *et al.* 2008, 2010; Hsu 2007; Knight and Ricciardelli 2003; Lin 2006; Matsubayashi *et al.* 2006; Phelan *et al.* 2004; Tate, Lah and Cuddy 2003; von Faber *et al.* 2001). A definition or conceptualisation of healthy ageing that includes the subjective and more qualitative perceptions of older people themselves would be valuable for effective public-health policy in order to improve their quality of late life (Bowling 2006; Phelan and Larson 2002). Furthermore, studies have shown that older people's norms, perceptions and self-awareness of the reality of ageing vary among different cultures. Attitudes and behaviours relevant for healthy ageing are greatly influenced by traditions, religious beliefs and values derived from different individual cultural backgrounds (Kickbusch 2005; Moberg 2005). Whereas older lay people's definitions of healthy ageing (and their perception of health status) reflect culturally-specific views, academic definitions seem to be independent of cultural identity (*cf.* Garroutte *et al.* 2006).

In summary, a better view of lay (*versus* academic) definitions of healthy ageing and of cultural variations is needed. This paper presents a literature review of the concept of 'healthy ageing' across different cultural perspectives, derived from both the western and non-western world, with the intention of identifying cross-cultural consistency or diversity. In addition, we have compared the views of academic researchers and older lay people on healthy ageing. The combination of cultural influences and academic *versus* older people's views are then examined in order to provide a more comprehensive inventory of various concepts and definitions of healthy ageing.

Methods, sources and search strategy

We conducted a literature review to map conceptually the different definitions of 'healthy ageing'. The literature search included the key databases from different domains (biomedicine, public health, psychology, and

gerontology). We searched for published studies in *PubMed, MEDLINE, EMBASE, CINAHL, PsycINFO* and *AGELINE*, from the inception date of each database up to 24 October 2008. In addition, we also utilised the *PubMed* 'related articles' function to identify relevant papers. The umbrella concept of 'healthy ageing' and related terms including 'successful ageing', 'positive ageing', 'active ageing', 'robust ageing' and 'ageing well', combined with 'definitions of', 'concepts of' and 'cultural aspects' were entered as search terms. We selected papers with these words in either title or abstract. Full papers for each selected abstract were obtained. We manually scanned the reference lists of all retrieved full papers and included further relevant papers. Studies were included if they:

1. Aimed to conceptualise or define 'healthy ageing' (the 'umbrella term' used in this paper so as to include concepts such as 'successful ageing', 'active ageing', 'positive ageing', 'robust ageing' and 'ageing well').
2. Included 'academic definitions' (*i.e.* studies which did not adopt the definitions directly from old lay people) or old lay people's perceptions of healthy ageing (*i.e.* studies which directly included old people's subjective perceptions of healthy ageing, using questions such as 'What do you think are the things associated with healthy ageing?').
3. Developed operational or prototype definitions of healthy ageing.
4. Were published in peer-reviewed journals.

Studies were excluded if they:

1. Had no explicit conceptualisation of healthy ageing (same as above, an umbrella term).
2. Recruited lay study participants (if applicable) younger than 50 years of age.
3. Were review papers, not original articles.
4. Were not available as full papers in English or Chinese (traditional characters).

The data-extraction process had three steps. First, we included or excluded all articles generated from the electronic databases and manual searches based on whether their titles contained relevant 'healthy ageing' terms. If the title was not a clear reason for exclusion, we included the paper. Next, we read the abstracts of all selected titles to decide whether the paper was relevant or not. Finally, full papers of all the selected abstracts were obtained and reviewed for content to determine whether the paper met the inclusion criteria and no exclusion criterion. From the selected papers, we extracted the explicit prototype definitions of healthy

ageing and other key information (such as first author, published year, country of research, name of study, and terms used). Afterwards, working from on the original, literal expression of the prototype definitions, we extracted the key components of the prototype definitions, and then classified the definitions into domains. For example, the definition 'healthy ageing was defined as an optimal state: only minor physical disabilities, regular social activities, good psycho-cognitive function, and high feelings of well-being and also a process – the healthy adaptation to physical limitation; successful in the sense of satisfactory to the person concerned' from von Faber *et al.* (2001: 2699) was categorised or coded for six domains: physical function, mental function, social function, life satisfaction, happiness/wellbeing, and adaptation.

Results

The steps in the identification and selection of papers for review are summarised in Figure 1. The electronic database searches and subsequent reference-list searches yielded 1,142 titles, and we considered that 250 abstracts required to be read. The review of the abstracts identified 70 papers as irrelevant, because they did not define or conceptualise healthy ageing. Of the remaining 180 abstracts, 58 indicated that the papers met all the inclusion criteria and so the full papers were obtained. Appraisal of the full papers found that 24 did not in fact meet all the criteria, leaving 34 for close analysis.

The prototype definitions of healthy ageing identified in the selected 34 studies are presented in Table 1, together with the first author, published year, country of research, name of study (if applicable), and terms used. Depending on whether the studies drew on academic definitions or lay perspectives (see 'Methods'), we labelled the selected studies as 'academic-perspective study' or 'lay-perspective study'. The key components of the definitions of healthy ageing are shown in Table 2. After literally examining the 34 papers, the key components of the prototype definitions were categorised into 12 domains. In Table 2, the first 11 studies address lay views.

Of the 34 selected studies, two were cross-national. Lamb and Myers (1999) included three East South Asian countries: Indonesia, Sri Lanka, and Thailand. Fernández-Ballesteros *et al.* (2008) examined data from seven Latin/Southern American countries: Ecuador, Uruguay, Chile, Columbia, Mexico, Cuba, and Brazil and three European countries: Spain, Portugal, and Greece. The other 32 studies were conducted in a single country: six in Asia (three in Taiwan, one in Hong Kong, one in

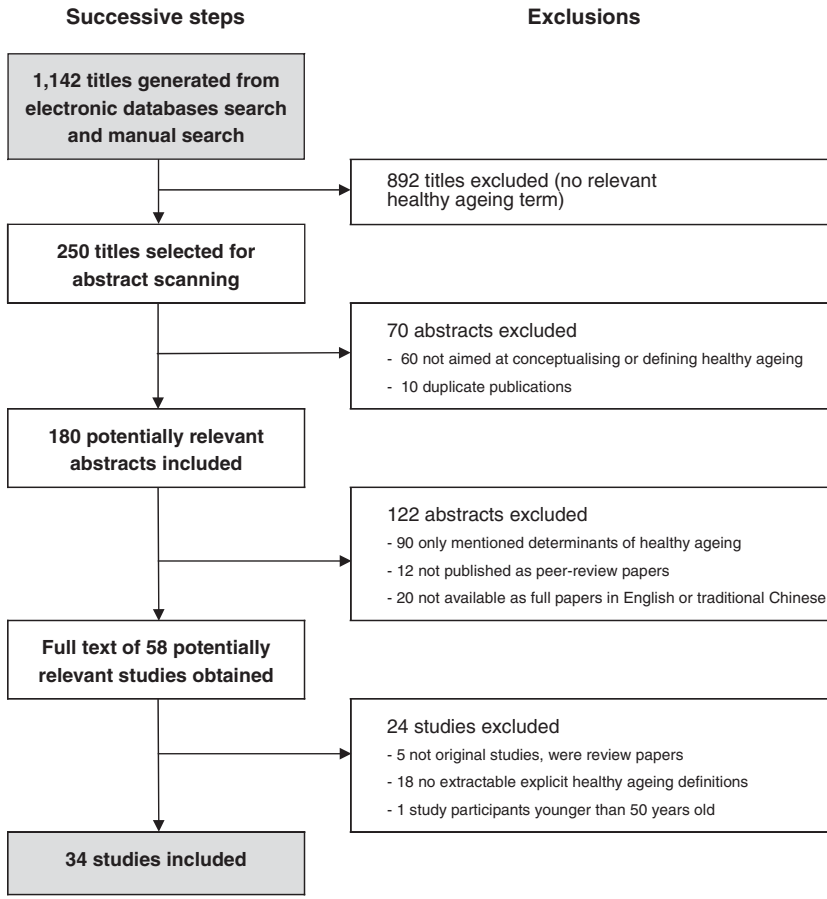

Figure 1. Steps in identifying the papers for review.

China, and one in Japan); six in Western Europe (one in The Netherlands, two in England, one in Germany, one in Demark, and one in Finland), two in Australia, and 18 in North America (three in Canada, 15 in the United States of America).

Terminology for the key domains

As arrayed in Table 2 (column 'terms used'), 24 of the 34 studies used the term and concept 'successful ageing', five used 'healthy ageing', and two used 'active ageing', while 'successful mental health ageing', 'robust ageing' and 'ageing well' were each used in one study. Twelve domains or key components in the definitions of healthy ageing were

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TABLE 1. *The definitions of healthy ageing and use of cognate terms in the 34 papers*

Authors/Name of study		Term used	Prototype definitions of healthy ageing
A. Studies that indicated lay views:			
1	Lin 2006	Successful ageing	Health independence, family, financial security, life adaptation, personal growth, and friends/relatives relationship
2	Hsu 2007/Successful ageing of the elderly in Taiwan survey of 2004	Successful ageing	Physical health, independence, living without chronic disease, living with family, receiving emotional care from family and friends, economic security, spiritual wellbeing, and political/social welfare policy, obligation-free life, peaceful mind
3	Matsubayashi *et al.* 2006	Successful ageing	Remain in good health, able to take care of oneself, having family and friends, good genes, free of chronic diseases, satisfied with life, adjusted to age-related changes
4	Fernández-Ballesteros *et al.* 2008	Ageing well	Good health, satisfaction with life, having friends and family, adjusting to changes, taking care of oneself, being free of chronic diseases
5	von Faber *et al.* 2001/Longitudinal Leiden 85-Plus Study	Successful ageing	An optimal state: only minor physical disabilities, regular social activities, good psychocognitive function, and high feelings of wellbeing and also a process – the successful adaptation to physical limitation, successful in the sense of satisfactory to the person concerned
6	Bowling 2006/British longitudinal survey	Successful ageing	Mental, physical and social health, functioning and resources, psychological outlook, life satisfaction, having a sense of purpose, financial security, learning new things, accomplishments, physical appearance, productivity, contribution to life, sense of humour, and spirituality
7	Bowling 2008/British NatCen Omnibus Survey	Active ageing	Having/maintaining physical health and functioning, leisure and social activities, mental functioning and activity, social relationships and contacts, services, neighbourhood and local facilities, psychological, finances, independence
8	Knight and Ricciardelli 2003	Successful ageing	Health, activity, personal growth, happiness, independence, relationship, appreciation of life. Longevity is least mentioned
9	Tate *et al.* 2003/Manitoba Study follow-up (MFUS)	Successful ageing	Health and less pain, happiness, enjoy life, keep physically, mentally and socially active, positive outlook, close family and friends, independency, spirituality

Table 1. *(Cont.)*

Authors/Name of study		Term used	Prototype definitions of healthy ageing
10	Phelan *et al.* 2004/KAME (Japanese American) and ACT (Adult Change in Thought) Study	Successful ageing	Multidimensional, encompassing physical, functional, psychological and social health
11	Montross *et al.* 2006	Successful ageing	Independent living, positive adaptation, active engagement with life, mastery/growth, life satisfaction/wellbeing, freedom of disability, absence of disease
B. Studies that indicated academic/clinical views:			
12	Hsu and Chang 2004/Survey of health and living status of the elderly in Taiwan	Active ageing	Basic criteria of elder health, including indicators of normal ADLs, normal cognitive function and absence of depressive symptoms, and with high social support
13	Chou and Chi 2002	Successful ageing	Four dimensions including functional status, affective status, cognitive status, and productive involvement status.
14	Li *et al.* 2006/Shanghai Dementia Survey	Successful ageing	A multi-dimensional model, include the following four dimensions: physical and cognitive function, ADLs, mood status (no depression), and no disability
15	Lamb and Myers 1999/The Determinants of Healthy Ageing Project (WHO)	Successful ageing	High level of functioning, no ADL difficulties, at most one physical performance difficulty
16	Baltes and Baltes 1990/Berlin Ageing Study	Successful ageing	The meta-model of 'selective optimisation with compensation' defines success as goal attainment and successful ageing as minimisation of losses and maximisation of gains
17	Avlund *et al.* 1999	Successful ageing	Active life expectancy, including high physical, memory function, social participation and life satisfaction
18	Uotinen *et al.* 2003/Study of Older Finnish People	Successful ageing	No illness or injury presenting problems in daily life, no health problems imposing limitations on hobbies, self-rated cognitive functioning better than satisfactory, age-comparative functional capacity as good, and no signs of depression
19	Almeida *et al.* 2006	Successful mental health ageing	Reaching age 80 years with Mini-Mental State Examination Score of 24 or more and Geriatric Depression Scale-15 items (GDS-15) score of 5 or less
20	Roos and Havens 1991/ Manitoba Study	Successful ageing	Living independent in community, receiving less than 60 days of home care services, function well. Mental status test scored 7+

21	Menec 2003/Manitoba Study	Successful ageing	Physical and psychological activities
22	Palmore 1979/Duke Longitudinal Study	Successful ageing	Met three criteria: (1) survival to age 75, (2) a physical-function rating indicating less than 20% disability and (3) a happiness rating indicating generally or always happy, contented and unworried
23	Guralnik and Kaplan 1989/Alameda County Study	Healthy ageing	A high level of physical functioning and measured as scoring in the top 20% on assessment of the full spectrum of functioning
24	Berkman *et al.* 1993/Epidemiologic Study of the Elderly (EPESE)	Successful ageing	Joint physical and cognitive abilities of older men and women
25	Fried *et al.* 1994/Cardiovascular Health Study	Successful ageing	Free of physical disability
26	Garfein and Herzog 1995	Robust ageing	Four criteria: productive involvement, affective status, functional status, and cognitive status
27	Strawbridge *et al.* 1996/Human Population Laboratory Alameda County Study	Successful ageing	Having minimal interruption of usual functioning in basic activities and physical performance measures, mental health: absence of depression, having close personal contacts and higher community involvement, physical activity
28	Rowe and Kahn 1997/MacArthur Foundation Research Network on Successful Ageing	Successful ageing	Multidimensional, encompassing the avoidance of disease and disability, the maintenance of high physical and cognitive function, and sustained engagement in social and productive activities
29	Reed *et al.* 1998/Honolulu Heart Program	Healthy ageing	Surviving to late life and remaining free of major chronic illness and physical and cognitive impairments
30	Ford *et al.* 2000/Cleveland Urban Area	Successful ageing	Sustained independency in the community
31	Vaillant and Western 2001/Harvard Study of Adults Development	Healthy ageing	Survival to older age with a high level of wellbeing in domains of physical, mental, and social functioning
32	Burke *et al.* 2001/Cardiovascular Health Study	Healthy ageing	Maintain physical health
33	Newman *et al.* 2003/Cardiovascular Health Study	Successful ageing	Remaining free of major, life-threatening disease and having normal physical and cognitive functioning
34	Tyas *et al.* 2007/Nun Study (all members of the Scholl Sisters of Notre Dame)	Healthy ageing	Based on measures of global cognitive function, short-term memory, basic and instrumental ADLs, and self-rated function, also avoiding Alzheimer's pathology and brain infarcts

Notes: The table presents all the reviewed studies, beginning with those that used lay views, followed by those using academic views. Within each block, the studies are ordered by geographical area and publication year. ADLs: activities of daily living.

identified: physical functioning (32 studies), mental/cognitive functioning (22), social functioning (15), independency (10), happiness/wellbeing (9), life satisfaction (8), longevity (5), living with/close to family (5), adaptation (5), financial security (4), personal growth (4), and spirituality (3). Twenty-nine of the 34 studies had multi-domain definitions and five included only one key domain (one used 'mental/cognitive functioning' only, one 'independency' only, and three 'physical function' only).

Cross-national/cultural patterns

As shown in Table 2, among the 12 key identified domains of healthy ageing, 'physical function', 'mental function' and 'social function' were the three most frequently described in all continents. 'Mental function' was mentioned in all Canadian and six European studies but in less than one-half (45.5 %) of the Asian studies. Only one American study included 'life satisfaction', and none of the American and Australian studies mentioned the 'family' domain. On the other hand, 'financial security' was used in only two of the seven Asian studies and in one from England. 'Longevity' was only mentioned (to a variable extent) in the American and Canadian studies.

Lay perceptions versus academic views

Of the 34 analysed studies, 11 described 'lay-people's views' (*see* Table 2). These referred to a greater number and variety of domains or key components than the studies that used academic definitions of healthy ageing. As Table 2 illustrates, the lay definitions usually included domains over and above physical, mental/cognitive, and social functioning. The number of domains in lay definitions of healthy ageing ranged from three to 13, whereas the number of domains in the academic definitions varied from one to five. The mean numbers of domains were 7.3 (lay) and 2.5 (academic). There were notable differences in the domain composition of the lay and academic definitions of healthy ageing. 'Longevity' was not mentioned in any of the lay-view studies, but appeared in five of the 23 academic-view studies. Some domains mentioned by the 11 lay informants were not included in any of the academic-view studies, namely 'family', 'adaptation', 'financial security', 'personal growth' and 'spirituality'.

Discussion

This review paper has examined reported conceptualisations of 'healthy ageing' from the perspectives of both academic and clinical researchers

TABLE 2. *The key domains of healthy ageing identified in the 34 studies*

	Study authors	Term used	Country	Twelve key domains of healthy ageing												Number of domains
				Physical function	Mental function	Social function	Independency	Happiness Wellbeing	Life satisfaction	Longevity	Family	Adaptation	Financial security	Personal growth	Spirituality	
A. Studies that indicated lay views:																
1	Lin 2006	S	Taiwan	X			X	X			X	X	X	X		7
2	Hsu 2007[3]	S	Taiwan	X			X	X			X		X		X	9
3	Matsubayashi *et al.* 2006[4]	S	Japan	X			X		X		X	X				6
4	Fernández-Ballesteros *et al.* 2008	W	Americas[1]	X			X		X		X	X				5
5	von Faber *et al.* 2001	S	Netherlands	X	X	X		X	X			X				6
6	Bowling 2006[5]	S	England	X	X	X							X	X	X	13
7	Bowling 2008[6]	A	England	X	X	X	X						X			9
8	Knight and Ricciardelli 2003	S	Australia	X		X	X	X	X					X		6
9	Tate *et al.* 2003[7]	S	Canada	X	X	X	X	X	X		X				X	9
10	Phelan *et al.* 2004	S	USA	X	X	X										3
11	Montross *et al.* 2006	S	USA	X		X	X	X	X			X		X		7
	Frequency among the 11 studies			11	5	7	8	6	6	0	5	5	4	4	3	80
	Per cent			100	46	64	73	55	55	0	46	46	36	36	27	
B. Studies that indicated academic/clinical views:																
12	Hsu and Chang 2004	A	Taiwan	X	X	X										3
13	Chou and Chi 2002	S	Hong Kong	X	X	X										3
14	Li *et al.* 2006	S	China	X	X											2
15	Lamb and Myers 1999	S	S. Asia[2]	X												1
16	Baltes and Baltes 1990	S	Germany	X	X	X										3
17	Avlund *et al.* 1999	S	Denmark	X	X	X			X							4
18	Uotinen *et al.* 2003	S	Finland	X	X											2
19	Almeida *et al.* 2006	M	Australia		X											1
20	Roos and Havens 1991	S	Canada	X	X		X									3

Table 2. *(Cont.)*

	Study authors	Term used	Country	Twelve key domains of healthy ageing												Number of domains
				Physical function	Mental function	Social function	Independency	Happiness Wellbeing	Life satisfaction	Longevity	Family	Adaptation	Financial security	Personal growth	Spirituality	
21	Menec 2003	S	Canada	X	X			X	X	X						5
22	Palmore 1979	S	USA	X				X		X						3
23	Guralnik and Kaplan 1989	H	USA	X												1
24	Berkman *et al.* 1993	S	USA	X	X											2
25	Fried *et al.* 1994	S	USA	X												1
26	Garfein and Herzog 1995	R	USA	X	X	X										3
27	Strawbridge *et al.* 1996	S	USA	X	X	X										3
28	Rowe and Kahn 1997	S	USA	X	X	X										3
29	Reed *et al.* 1998	H	USA	X	X					X						2
30	Ford *et al.* 2000	S	USA				X									1
31	Vaillant and Western 2001	H	USA	X	X	X		X		X						5
32	Burke *et al.* 2001	H	USA	X						X						2
33	Newman *et al.* 2003	S	USA	X	X											2
34	Tyas *et al.* 2007	H	USA	X	X											2
	Frequency among the 23 studies			21	17	8	2	3	2	5	0	0	0	0	0	57
	Per cent			91	74	35	9	13	9	22	0	0	0	0	0	
	Frequency among all 34 studies			32	22	15	10	9	8	5	5	5	4	4	3	137
	Per cent			94	65	44	29	27	24	15	15	15	12	12	9	

Notes: Key to central terms: S: successful ageing; W: ageing well; H: healthy ageing; A: active ageing; R: robust ageing; M: successful mental health ageing. 1. Includes: Ecuador, Uruguay, Chile, Columbia, Mexico, Cuba, and Brazil and Spain, Portugal, and Greece. 2. Includes: Indonesia, Sri Lanka, and Thailand. 3. Includes other domains: receiving emotional care from family and friends, political and social-welfare policy, obligation-free late life, and peaceful mind. 4. Includes good genes as domain. 5. Includes other domains: psychological and physical outlook, sense of purpose, accomplishments, productivity, contribution to life, and sense of humour. 6. Includes other domains: leisure activities; service, neighbourhood, and local facilities. 7. Includes positive outlook as domain.

and older lay people. In addition, a comparison of concepts of healthy ageing from different national and cultural backgrounds was made. As compared to previous studies, our study adds value to the literature in focusing on these two dimensions, and has allowed us to identify domains of healthy ageing that have been deemed important by lay people but not addressed by researchers. It also allows us to examine how healthy ageing domains are viewed and valued across cultures.

The review has revealed both variations and consistencies. Considerable variations in the domains of healthy ageing were found among the 34 selected studies. Across the different cultures and countries, majorities of both academic researchers and lay older people nominated physical health, mental health and (to a lesser extent) social functioning as important aspects of healthy ageing. Compared to the academic views, lay concepts of healthy ageing included many more domains, regardless of the country and study design. Cross-culturally, older people hold comprehensive views of healthy ageing which go beyond mere functional independency and introduce aspects such as family, adaptation to age-related changes, financial security, personal growth, positive spirituality, and positive outlook. We dichotomised the selected studies into those that were informed by 'academic views' and those that drew on 'lay views'. Surprisingly, we did not find any paper among the 34 that included definitions of healthy ageing from *both* academic and lay people. Therefore we had to compare between definitions in different studies rather than between different response groups within the same study.

As previously reported by Peel (2004), we found that 'successful ageing' is the most common term in the literature, although there is also substantial variation in terminology. Since Rowe and Kahn (1987, 1997) proposed the concept of 'successful ageing' as distinct from 'usual ageing' and elaborated the concept in 1997, the term has prevailed in the literature. There has, however, been criticism that 'success' in western culture is usually associated with economic and/or material achievement (Peel 2004). Furthermore, the concept of ageing should be better placed on a continuum of achievement, rather than being dichotomised into success or failure (Bowling 1993, 2005). Some researchers have proposed that 'healthy ageing' is a more appropriate term by which to recognise positive health outcomes in later life (Kendig and Browning 1997; Peel 2004; Schulz and Heckhausen 1996). In addition, 'healthy ageing' is probably clearer and more widely understood than 'successful ageing', and has the merit of engaging with the broad WHO definition that was formulated in 1948 and not since been changed: 'health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 1948: 100).

We recommend 'healthy ageing' as the most useful umbrella term to cover the overlapping ideas denoted by the cognate terms 'active ageing', 'successful ageing', 'positive ageing' (the term used by Chong *et al.* (2006) to incorporate the economic aspects of ageing), and 'ageing well'. Although one might expect that the different terms focus on different aspects of wellbeing, as shown in Table 2 no clear pattern of variation was observed. The various terms all seem to refer to quality of life aspects of ageing. Healthy ageing in our view is the more appropriate term by which to recognise positive health outcomes in later life and to cover the broad WHO definition of health. Whichever term is used, the concept 'healthy ageing' should differentiate those older people who experience positive outcomes in old age, not only in maintaining good physical health and functioning, but also in coping and remaining in control of later life and to age well in accordance with the values of their own cultures (*see also* Bowling 2007; Depp, Glatt and Jest 2007; Strawbridge, Wallhagen and Cohen 2002).

Of the 12 key domains of healthy ageing identified by this review, 'independency', 'longevity', 'family', 'adaptation', 'financial security', 'personal growth', and 'spirituality' were rated differently by academic and lay older people. Our study shows that the majority of the latter (*i.e.* 73 % of the lay-view studies) included the term 'independence', indicating that older people place great weight on being in control and responsible for their lives (*i.e.* being independent, and to maintain good health and to make their own decisions in daily life). Other independence-related domains of healthy ageing, such as 'family', 'adaptation', 'financial security', 'personal growth' and 'spirituality', were mentioned only in the lay-view studies and in none of the studies using academic definitions. It should be noted, however, that how lay older people perceive 'personal growth' and 'spirituality' has not yet been fully explicated in literature and invites further investigation.

It is possible that academic researchers use different dimensions in their healthy ageing definitions than older lay people because of the differing perspectives generated by various professional responsibilities and backgrounds (*e.g.* medical doctors, psychologists and social scientists). Bowling's (2007) review identified 170 papers on healthy ageing, revealed a wide range of definitions and suggested that the different usages 'generally reflect the academic discipline of the investigator' (Bowling 2007: 263). Glass (2003) pointed out that two schools can be distinguished in the definition of healthy ageing: the biomedical and the psychosocial. In our 34 selected studies, the domains of healthy ageing defined by academic researchers with a background in medicine (as derived from their affiliations) tended to stress physical functioning in healthy ageing;

the additional dimensions in lay people's definitions reflect more on psychosocial concepts. The differences between biomedical and the more psychosocial-oriented lay definitions perhaps underline the need for more qualitative studies of healthy ageing to explore the different dimensions used by academic and lay old people (Depp, Glatt and Jeste 2007).

Particularly in Asia, lay older people perceived 'family' and 'financial security' as integral parts of healthy ageing, in contrast to lay views in other geographic areas. This could be profoundly influenced by shared traditional values in Taiwan, Japan and China (Hsu 2007), as epitomised in such phrases as 'the more off-spring, the more blessings' and 'the big happy family' (at least three generations in one household). Older people in these countries prefer living with their extended families rather than living alone, partly thereby to secure finances (Chong *et al.* 2006; Hsu 2007). Maintaining close contact with and being supported by their extended families and enjoying a leisurely late life are perceived as more important components of healthy ageing than 'social functioning' or 'active social participation', while on the contrary, having no filial children and needing to work in old age to support oneself are regarded as a recipe for a miserable late life (Hsu 2007). As for financial security, adequate income, sufficient pension, social security, other benefits and discounted social services are considered key ingredients of a financial safety net, particularly for the groups of lay older people in Asia and in England whose views were reported in the selected studies (Bowling 2006, 2008; Hsu 2007; Lin 2006).

Some limitations of the present study need to be mentioned. First, although this review has examined cross-cultural differences of healthy ageing concepts, its scope has been limited to published peer-reviewed papers in English or Chinese (traditional characters), possibly omitting relevant literature in other languages. Future studies should include more concepts derived from papers in other languages. Another limitation of this study could arise from the search strategy. Although we used healthy ageing as an umbrella concept (and included the related terms 'successful ageing', 'active ageing', 'positive ageing', 'robust ageing' and 'ageing well'), we might have missed other cognate terms.

The findings point to certain areas and questions that require future research. First, some domains such as 'family', 'adaptation', 'financial security', 'personal growth' and 'spirituality' were only mentioned in the lay older people view studies. Future research could investigate these domains in more depth to learn why older people perceive these domains as important aspects of healthy ageing. Furthermore, as the ageing issues might become more complicated in the coming decades (Lee and Fan 2008), it would be valuable to study how older people in the future

(presently younger than 50 years of age) perceive healthy ageing, in order to provide some indication on how the concept of healthy ageing might evolve in the near future and how the younger generation prepares for healthy ageing (Chong *et al.* 2006).

In conclusion, this review has confirmed that healthy ageing is a multi-dimensional and complex concept, and that different views on healthy ageing exist between different cultures and between academic and older lay people. The variation between older lay people and academic researchers is more robust than across cultures. As shown in this review, older lay people all over the world include more components in their perceptions of healthy ageing than their academic counterparts. As the ultimate goal of health and social policies is to increase the quality not just the quantity or length of later life, subjective experiences or perceptions of quality of life need to be taken into account by professional or objective definitions. Academic researchers should broaden their classical 'physical–mental–social' view on healthy ageing, by incorporating more holistic perspectives of older lay people from different cultural settings, in order to construct a more comprehensive and culturally-sensitive concept of healthy ageing and to develop more realistic and effective measurements of healthy ageing.

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