

Sheung-Tak Cheng · Iris Chi
Helene H. Fung · Lydia W. Li
Jean Woo *Editors*

Successful Aging

Asian Perspectives



Springer

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Chapter 1

Successful Aging: Concepts, Reflections and Its Relevance to Asia

Sheung-Tak Cheng, Helene H. Fung, Lydia W. Li, Tianyuan Li, Jean Woo, and Iris Chi

Definitions of Successful Aging

Old age has been associated with disease and impairment, frailty and dependency; an undesirable if not dreadful portrayal. Thus, initially the field of gerontology was dominated by the view of older persons as feeble and dependent. However, researchers and practitioners have challenged this conceptualization by noting

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another possible late life experience—a successful one. Since then, numerous studies have sought to discover paths to successful aging by identifying the factors and mechanisms that contribute to sound physical and mental health in later life. The “new gerontology” is one in which older persons are seen as active agents in shaping their environments and life course.

Butler coined the term *productive aging* when he was chairing the Salzburg Seminar on dependency in old age. Instead of focusing on dependency, he challenged the participants to consider the more positive sides of aging. By “productive aging,” Butler referred to the performance of paid and unpaid work (e.g., volunteer activities) as well as self-care activities (Butler & Gleason, 1985). Taking care of oneself is also productive because it enhances autonomy and reduces dependency on others. In fact, Butler was the influential scholar who coined the term *ageism* (Butler, 1975). He saw productive aging as a way to combat ageism, to recognize the contributions of older people, and to reduce the perception that they are a burden to society.

Another concept called *healthy aging* is primarily concerned with the modification of diet and life habits to enhance physical and mental health (Kalache & Kickbusch, 1997). The concepts of productive and healthy aging were incorporated into World Health Organization’s (WHO) *active aging* policy framework. WHO (World Health Organization, 2002) argued that countries could “afford to get old” (p. 6) if they optimize “opportunities for health, participation and security in order to enhance quality of life as people age” (p. 12). By “health,” WHO adopted a holistic definition of physical, mental and social well-being and the maintenance of autonomy and independence, and by “active,” it referred to “continuing participation in social, economic, cultural, spiritual and civic affairs” (p. 12).

The Rowe and Kahn Model

Perhaps the most dominating model in the field of gerontology is the one put forward by Rowe and Kahn (1997, 1998). In this model, *successful aging* is jointly defined by low probability of disease and disease-related disability, high cognitive and physical functioning, and engagement with life. They highlighted two aspects of engagement, namely social connectedness and productive activities. These three aspects were presumed to be hierarchical, with avoiding diseases and disability providing the basis for high physical and cognitive functioning, which in turn facilitates engagement with life. This model was expanded from their 1987 paper in *Science* (Rowe & Kahn, 1987), using findings from early field studies of the MacArthur Study of Successful Aging. In their 1987 paper, they argued that the field had been primarily concerned with describing the differences between usual aging and pathological aging, but neglected the heterogeneous trajectories of aging at the upper end of the spectrum. They believed that a large part of age-related declines in usual aging was age-related, but not age-dependent. Indeed, with age, the genetic heritability of various diseases decreases (Willett, 2002) whereas the role of lifestyle increases. By proposing the concept of successful aging, Rowe and Kahn

(1997, 1998) hoped to stimulate more research into identifying modifiable factors such as diet, exercise, personal habits (e.g., smoking), and psychosocial factors (e.g., optimism, social support), and use the findings to promote lifestyle modifications so as to enhance the likelihood of aging well in the population.

Though appealing, Rowe and Kahn's concept of successful aging has probably generated more debates and controversies than any other topics in the past 15 years in gerontology. These discourses that have taken place in the Western literature happen to be rather relevant for examining successful aging in the social and cultural contexts of many Asian countries. One source of discontent stems from the primacy that the model places on achieving disease- and disability-free states. Together with the term "successful," critics argued that the model fostered the unrealistic image of "agelessness" and favored those with genetic advantages, while implying that the majority would be "losers" (Moody & Sasser, 2012; Strawbridge, Wallhagen, & Cohen, 2002).

In their widely cited review, Depp and Jeste (2006) found that 90 % of the operational definitions of successful aging included measures of disability and/or physical functioning, most typically in terms of self-reported activities or instrumental activities of daily living as well as objective performance measures such as grip strength, lifting a 10-lb weight, and gait and balance. Compared with disability/physical functioning, only 21 % of the studies included absence of chronic diseases which was the most unattainable criterion (Jeste, Depp, & Vahia, 2010). Given the increasing prevalence of chronic diseases and medical advances to contain the effects of various diseases on daily life, it is doubtful whether a simple presence/absence of disease will continue to be very useful in characterizing the extent to which one has aged successfully. Cognitive functioning, typically assessed by global measures of cognition and occasionally neuropsychological tests, was included in roughly half of the studies in Depp and Jeste's review. The variety of the measures and the lack of clear cutoffs for many of them make the operationalization of this criterion particularly problematic. Note also that staying above the cutoff for cognitive impairment does not necessarily mean *high* cognitive functioning. The MacArthur Studies of Successful Aging even adopted a criterion that could have placed those with borderline cognitive impairment in the successful aging category (Berkman et al., 1993). In addition to disability/physical functioning and cognitive functioning, 29 % of the studies in Depp and Jeste's review included measures of social/productive engagement.

In Western studies, typically around 20 % of the older population meet the criteria of physical (or absence of or minimal disability) and cognitive functioning simultaneously (Depp & Jeste, 2006), while much fewer may be deemed successful if engagement with life is also included and more restrictive (e.g., absence of major chronic diseases) criteria are used (McLaughlin, Connell, Heeringa, Li, & Roberts, 2010). In Asia, similar studies are few. In a Hong Kong sample, Chou and Chi (2002) found that only 0.8 % were successful agers, who had no functional impairment, regular exercise, no depressive symptoms, high global cognitive performance, assistance provided to family and friends, and employment status. Ng and colleagues (2009), on the basis of absence of instrumental activities

of daily living (IADL) impairment, self-rated health, global cognitive functioning, depressive symptoms, life satisfaction, and at least one social and productive activity per week, classified 29 % of Singaporean Chinese as successful agers. In a study of Malaysians, no major disease, no ADL or IADL impairment, good self-rated health, and no diagnosis of depression and dementia were used to define successful aging; only 14 % met the criteria simultaneously (Hamid, Momtaz, & Ibrahim, 2012). On the basis of absence of physical disabilities, minimal impairments in activities of daily living (ADL), good global cognitive performance, and self-rated good mood, as many as 46 % of a large sample of Shanghai older adults were classified as successful agers (Li et al., 2006). Such diverse estimates may reflect cross-national differences in health and participation status, but more so differences in sampling and measures and their cutoffs. There are simply no well-established ways to define successful aging operationally.

Recently, Cheng (2014) argues that the field needs to distinguish pathways (e.g., adherence to a healthy lifestyle) from outcomes (e.g., daily functioning), and to make reference to age-appropriate norms in measuring successful aging. Because of Rowe and Kahn's "ageless" model, successful aging has been found consistently to be less likely in the older age categories (Depp & Jeste, 2006), as older adults (those aged 60+ or 65+ years) are treated all the same. As more and more people are living into very old ages, a different discourse in successful aging may be necessary. Instead of being obsessed with disease- and disability-free states, it is important to recognize that many diseases would not affect daily functioning if properly managed, and disabilities may be compensated using modern technologies. Cheng proposes that successful aging may be defined in terms of age-appropriate norms in physical, cognitive, social, and psychological functioning, while pathways to achieve high functioning in relative terms should be emphasized as being possible even for those with diagnosable disease conditions. If people feel that successful aging is not achievable and ignore it, then the concept fails in terms of guiding positive development in later life. Successful aging should be a concept that is relevant to most people, rather than just an "elite group."

Another source of discontent with the Rowe and Kahn model concerns the emphasis on individual agency to achieve successful aging, ignoring larger social structural constraints on developmental trajectories (Riley, 1998), such as health disparity due to socioeconomic differences (Ferraro & Shippee, 2009). Whether these criticisms were entirely fair to Rowe and Kahn or not (see Kahn, 2002 for a rebuttal), they are particularly relevant when we consider successful aging in Asia. Given the state of development in many Asian countries where access to health care is limited, especially in rural areas, it is a big question whether we should perpetuate a disease- or disability-free model of successful aging. Moreover, disregarding decline in certain aspects of family functioning, the family remains the primary vehicle for the fulfillment of individual needs (e.g., Cheng, Li, Leung, & Chan, 2011). In terms of successful aging, the Asian family may play a more influential role in various aspects such as diet, adherence to lifestyle modifications, social participation, and life satisfaction, than is conceived in Western individualistic models of successful aging (Chung & Park, 2008; Lam & Cheng, 2013).

As alluded to above, still another concern with the Rowe and Kahn model is the lack of reference to psychological well-being (Cheng, 2014), despite the fact that Havighurst (1961) had argued long ago, in the founding volume of *The Gerontologist*, that feeling satisfied with life, in terms of both its present state and how things have turned out in the past, is an important indicator of successful aging. The well-being paradox, a term describing the remarkable phenomenon of older adults maintaining well-being despite physical declines and social losses (Cheng, 2004; Cheng, Fung, & Chan, 2009; Kunzmann, Little, & Smith, 2000) until the last few years of life (Gerstorf et al., 2008), has long been recognized. The WHO emphasizes on holistic health that incorporates psychological dimensions. Unfortunately, other than cognitive functioning, emotional well-being was not included in the influential Rowe and Kahn model. Jeste and colleagues (2010) recently called for more research focus on “successful emotion aging” but fell short of proposing an overall model of successful aging that integrated emotional well-being with other elements.

Psychological well-being may be an especially relevant dimension of successful aging for Asia, in particularly East Asia. East Asian cultures are heavily influenced by the Taoist philosophy of *yin* and *yang*. While it is beyond the scope of this chapter to discuss Taoist philosophy in details, one central tenet of Taoist thinking is that *yin* and *yang* are essential for the maintenance and augmentation of each other. They are part and parcel of a holistic system of life energies, rather than two separate entities. This philosophy emphasizes on complementarity, balance, and harmony. The Taoist philosophy is the backbone of the thinking in Chinese medicine which treats people by restoring balance among different bodily organs. Other than this, there is one further important distinction with Western medicine—each bodily organ and their balance are thought to play crucial roles in physical and mental health (Han, 2008). From this perspective, it is inappropriate to emphasize physical over emotional health in Asian cultures. Researchers, practitioners, and policymakers working in this region need to bear in mind that messages to promote successful aging that do not emphasize the simultaneous developments of physical and mental health may not be effective or sustainable. In fact, given so many studies showing the beneficial effects of exercise on emotion in the West (Blake, Mo, Malik, & Thomas, 2009; Conn, 2010; Jeste et al., 2010), we wonder whether Western models of successful aging can continue to sideline psychological aspects of health.

The incorporation of psychological well-being has another important implication for the focus of models of successful aging. Extant models, whether it is the WHO or the Rowe and Kahn model, can be referred to as outcome-based models. In other words, successful aging is determined by whether the individual achieves, for example, certain health and cognitive outcomes as determined by experts. Psychological theories of successful aging are, however, process-oriented approaches. Whether it is selective optimization and compensation (Baltes & Baltes, 1990), the dual-process model (Brandtstädter & Rothermund, 2002), or the lifespan theory of control (Schulz & Heckhausen, 1996), the emphasis has been on the strategic disengagement from unattainable goals while concentrating resources on pursuing

attainable goals in an optimized fashion. Doing so requires regular adjustments in goal definitions and prioritization in light of declines and losses, and dynamic allocation of proactive as well as compensatory strategies to maximize performance in selected domains. When we shift from outcome- to process-oriented models (i.e., from outcomes to pathways; Cheng, 2014), we turn away from restricted definitions of successful aging and encourage resilience in aging despite objective challenges (e.g., lack of access to health care, natural disasters) and childhood adversities (e.g., World War II, Cultural Revolution during 1960s–1970s in China) and disadvantages (e.g., lack of educational opportunities, lack of vaccinations, etc.) that are common in the current cohort of older people in Asia (see also Richards & Hatch, 2011; Schafer & Ferraro, 2012).

Organization of the Book

In light of the above comments and observations, we believe that it is constructive to organize the book into four parts, each addressing a certain dimension relevant to successful aging. As mentioned above, we do not necessarily view successful aging in terms of narrow outcome indicators, but rather, we think that it is important to be inclusive of approaches that examine the resilience of older people, or what Morley (2009) called “aging successfully” as opposed to successful aging. Although resilience is not limited to emotional aspects, research has focused on emotional well-being and therefore we will devote a part to emotional resilience. In the following, we briefly introduce the themes in each part.

The Social Contexts of Successful Aging

To date, most of the research on successful aging has focused on person-level factors, partly reflecting the belief that successful aging is an individual achievement. But while Kahn (2003) maintained that “the health-promotive behaviors that improve one’s chances for aging successfully must be enacted by individuals,” he acknowledged that “the factors that encourage or discourage and enable or prevent such behavior are social” (p. 61). Successful aging is, in other words, as much a collective as individual responsibility. Ignoring the social context in which individuals act not only impedes our understanding of successful aging, but could lead to victim blaming by dismissing those who do not age successfully as responsible for their “failure.”

Estes and Mahakian (2001) underscored the research gap in their comment that the “social and environmental factors . . . remain underexplicated, undertheorized, and underresearched in the work on successful aging” (p. 202). For while it is indeed the case that individual decisions affect the chance of successful ageing, it is also true that an individual acts within the constraints and opportunities posed by his or her environment. In particular, when basic needs such as financial security, medical

care, housing and food become a struggle, there is less time and resources for other, aesthetically valued activities that make aging joyful. The purpose of the chapters in part I is to elucidate the role of social structural and policy contexts in influencing the experience of aging.

The parts has four chapters, each focusing on one Asian nation—China, Korea, Singapore and Japan, respectively. Though different in timing, all four nations have experienced industrialization and the accompanied socioeconomic and demographic changes. Their populations are aging rapidly; but their success in economic and social development, unfortunately, has weakened the social ties and structure on which older adults in these nations rely to age well (Crampton, 2009). This legitimizes calls for government interventions. The four nations respond differently to such calls and offer a range of institutional arrangements that have implications to individual's opportunity to realize successful aging.

Japan has an advanced system of layered state-sponsored institutions that reduce the burden on the individual and family for critical health and social needs (Yong, Minagawa, & Saito, Chap. 6). By collectivizing the provision of basic services, such as health and long-term care, Japan lays the foundation for older persons to elevate life-quality along meaningful and personal dimensions. Moreover, the state imposes both constraints and incentives on firms to employ elders, and institutionalizes programs to promote social participation and aging in place, making it possible for most Japanese to have a productive and active old age.

Clearly, with an advanced and stable economy bestows the necessary financial resources, Japan is comparatively better positioned than other Asian nations to establish a comprehensive package of benefits. China, in stark contrast, is a transitional quasi-market economy that is in a rapid stage of institutional development. While economic growth has raised the standard of living for a vast majority of Chinese, income gaps across different sectors of the population have widened, resulting in health disparities in old age across rural-urban areas, regions, socioeconomic strata and gender (Li & Zhang, Chap. 3). The State is making progress to reduce social inequalities, yet awareness to contend for an aging society is still at a nascent stage. In addition, rapid urbanization that has accompanied the economic growth has intensified risk factors for chronic illness and disability, threatening the prospect of successful aging for the current and coming cohorts of older Chinese.

Korea is similar to China in terms of neglecting to prepare for the demographic shift. In spite of being a high income developed nation, Korea has a high rate of poverty among its older population (Kang and Kim, Chap. 4). The reasons for the high poverty rate are complex. One such reason is the gap between the statutory retirement age and the age eligible for public pension. Developing policies to close the gap seems to be a simple solution; yet cultural, structural and political obstacles exist. Older women are particularly vulnerable to poverty, and they may not benefit from changes in retirement age. Financial strain is a stressor that could take a toll on physical and mental health. Coincidentally, Korea has one of the highest rates of suicide in older persons among OECD (Organization for Economic Co-Operation and Development) member countries (Park & Lester, 2008).

Unlike China and Korea, Singapore began formulating policies for its older population very early on in the State's development (Chan & Matchar, Chap. 5). Guided by the State ethos of individual responsibility, its aging policies are carefully designed not to take over but to reinforce the responsibility of individuals, families and communities to ensure quality of later life. The State enforces individual saving plans for retirement and medical care, uses tax and other incentives to encourage families to care for their elders, and subsidizes Voluntary Welfare Organizations to deliver long-term care services to the poor. But changes in family structure are putting pressure on the State to take on more responsibility of old age care, and the coming cohort of older Singaporeans is challenging the State to redefine its role in supporting successful aging.

Each of the chapters in this part has a different focus, reflecting the unique social context of the country. As a whole, they illustrate the diversity among Asian nations in how they balance the role of the State and the family in old age support, redefine the meaning of old age, and meet the challenge of a graying society. As well, they offer insights about policy approaches to support individuals to age successfully in this region.

Family and Social Relationships

Other than the macro-level policies described in part I, another important source of support for older adults is micro-level family and social relationships. Social relationships form a critical safety net that secures older adults' well-being when they face both physical and emotional losses in later adulthood. Asian countries are known for their collectivistic culture and the emphasis on harmonious relationship and filial piety (Cheng & Chan, 2006; Kwan, Bond, & Singelis, 1997; Markus & Kitayama, 1991). Thus, social relationships, especially family relationships, play a particularly important role in helping Asian older adults achieve successful aging. In the meantime, Asian countries are undergoing rapid economic, social, and cultural changes in the recent decades. Such development inevitably brings pressure on the traditional structure and functioning of older adults' social network and lead to changes in their relationship dynamics (see also Cheng, Chap. 2). Part II introduces older adults' social relationships, especially the relationship between older adults and their adult children, and how these relationships evolve over time and influence older adults' well-being in the changing era in Singapore, Japan, Mainland China, Taiwan, and Hong Kong respectively. While an emphasis was given to family relationships, the role of non-family relationships (e.g., friendships, relationship with neighbors) was also discussed.

Many common trends regarding older adults' social network and how it affects well-being can be observed among different countries in Asia. To begin with, family remains to be older adults' major support source in this region. The deeply rooted Confucian tradition strongly emphasizes family cohesion and filial piety. Most older adults in this region prefer family support over formal support including community-based or institutional programs. Whether one's children demonstrate

filial piety is significantly related to older adults' well-being. More specifically, sons and daughter-in-laws are still the most common support providers in Japan, Mainland China, and Taiwan (Katagiri & Wakui, Chap. 8; Lin, Chap. 11; Zhang & Du, Chap. 10).

Despite the continued respect for traditional values, Asian countries are undergoing similar social changes in recent years. Young adults today tend to marry at a later age and have fewer children compared with previous generations, leading to decreasing fertility rate in the region. At the same time, longevity has been increasing in Asia in recent decades. The unprecedented aging population brings great challenge for families to provide adequate support to older adults, as there are relatively fewer caregivers but more care recipients within a family. Community and institutional support programs, and social security system are becoming necessary supplements of the traditional family support system (Katagiri & Wakui, Chap. 8; Lou & Tong, Chap. 12; Zhang & Du, Chap. 10).

Probably because of these social changes, as well as the influence of Western culture, the traditional norm about filial piety is changing. While the reciprocal aspect of filial piety is still highly endorsed in younger generations, the authoritarian aspect of filial piety is less accepted. The younger generation still believes it is their responsibility to provide emotional and instrumental support to parents, but they are less willing to follow the parents' wishes blindly, especially when it comes to the children's personal issues (Kim, Cheng, Zarit, & Fingerman, Chap. 7).

Three-generational households are decreasing. More and more older adults now prefer to live independently but have frequent contact with children (Katagiri & Wakui, Chap. 8). Coresidence mostly happens when older adults' help is needed (e.g., taking care of grandchildren), or when older parents become sick or widowed. The traditional father-son relationship becomes less salient in the family system, while the husband-wife relationship is playing an increasingly important role. Marital satisfaction was found to have a stronger effect than intergenerational relationship quality in influencing older adults' life satisfaction in Taiwan (Lin, Chap. 11). The increasing acceptance of the gender equity notion also enhanced the interactions between married daughters and their parents (Katagiri & Wakui, Chap. 8).

In terms of the social exchanges between adult children and older parents, partly due to the extended education period and delayed marrying age of the younger generation, the current cohort of older adults tend to be supporting their adult children for a longer time than do previous cohorts (Katagiri & Wakui, Chap. 8). The amount of financial support provided to adult children is increasing, while that received from adult children is decreasing (Zhang & Du, Chap. 10). The development of more established social security system is an important contributor to older adults' rising financial independence in the region. In addition to financial support, older adults also provide help to their adult children by taking care of the grandchildren (Lou & Tong, Chap. 12), given that more and more women in the younger generation are working and cannot stay at home with the young children. Being independent and being able to provide support to other family members significantly contribute to older adults' subjective well-being. Nevertheless, this aspect of functioning may be suppressed by younger people's lack of respect for

their work, who think that the older generation's knowledge and methods have become obsolete, leading to disengagement from so-called generative goals (Cheng, 2009; Cheng, Chan, & Chan, 2008).

Although family members are the most preferred social partners for older adults in Asia, neighbors and friends are important substitutes to provide instrumental and emotional support to older adults when family members are not available (Tang, Chap. 9). As more older adults are living by themselves now, their children may not always be available to offer help due to geographical distance. Moreover, as belief in authoritarian filial piety is gradually fading, more conflicts may occur between older adults and their children. In these cases, neighbors and friends can be particularly important for older adults to maintain well-being.

Besides these common trends, each chapter also highlighted specific characteristics of older adults' social network in each country. For example, the economic inequality between urban and rural areas in Mainland China leads to different aging phenomena in the two areas (Zhang & Du, Chap. 10): People in big cities are more influenced by Western cultures and endorse traditional family values less compared with their counterparts in the countryside; better welfares in urban areas lead older adults to be less dependent on children's financial support; and migration of younger generations to big cities for better personal development leaves many skipped-generation households in the rural area (Kim et al., Chap. 7).

Together, the chapters in this part provide a comprehensive and up-to-date picture about older adults' social network dynamics in the rapidly developing Asia. Despite social changes leading to the weakening of traditional family roles, these authors suggest that the family is still the primary support resource for older persons in Asia, although they also note the relevance of friend and neighbor support when family members are not available. In the Asian context, coresidence with children, though becoming less common, is still considered by many to be the best vehicle to provide old age support. This stands in sharp contrast to North American and other Western countries. The chapters in this part also discuss how such dynamics in social relationships affect older adults' well-being. While displaying many common trends, different countries also demonstrate specific characteristics.

Optimizing Physical and Mental Health

While part I focuses on the impacts of social policies and part II focuses on the influence of the social environment, parts III and IV emphasize the role of the individual in successful aging. In particular, part III reviews the lifestyle risk factors that may contribute to some physical and mental disorders that are more prevalent in old age in Asia. It also reviews intervention efforts that aim at promoting healthy aging in Asia.

Needless to say, physical and mental disorders are significant challenges to successful aging. Chapter 13 by Yu, Chau and Woo reviews chronic disease burdens in different societies. Many chronic diseases, such as diabetes and stroke, are becoming more prevalent in Asia, leading to physical dependency on the part of

the older patients and heavy burden on the part of the caregivers. The increasing prevalence of chronic diseases and the heavy costs associated with them give rise to research to identify lifestyle risk factors which may be modified to enhance health and functioning.

Successful healthy aging requires the recognition that different systems of functioning are interrelated. For instance, age-related changes in body composition have impacts on physical and cognitive functions, even in the absence of diseases. These changes are associated with mortality and physical functioning levels, such that weight loss, rather than weight gain becomes more important, and promotion of lifestyle interventions targeted at weight maintenance would be important (Woo, Ho, Sham, 2001). The ratio of fat to muscle mass is an important factor affecting physical function (Woo, Leung, Kwok, 2007; Woo, Leung, Sham, Kwok, 2009), while cognitive decline frequently accompanies physical decline (Auyeung et al., 2008).

Probably because of this interconnectedness of different bodily systems, different lines of research have converged to a healthy diet (Lok, Chan, & Woo, Chap. 14) and regular physical activities (Woo, Yau, & Yu, Chap. 15) as major pathways to tackle a number of risk factors, including dyslipidemia, hypertension, hyperglycemia, and bone and muscle loss that are common to physical and cognitive declines.

The importance of lifestyle including nutrition for the health of the elderly has long been emphasized (Roubenoff, Scrimshaw, Shetty, Woo, 2000; Woo, 2000). The benefits of exercise for the health of older people have also been extensively documented (Bassey, 2000). Regular physical activity is associated with higher levels of cardiorespiratory fitness, leading to reduced risk of chronic diseases, disability and mortality. Recent studies have attempted to document the type, frequency and intensity of exercises (Blair & LaMonte, 2005), but data are lacking among the elderly population, as well as among Chinese people. Chapter 15 by Woo and colleagues reviews this scant but important literature in Asia. Other than physical activity, the roles of cognitive activities (Lam & Chan, Chap. 16) and diets (Yu et al., Chap. 13) for physical and cognitive health are also reviewed.

With respect to Alzheimer's Disease, there is increasing evidence that certain lifestyle factors predispose individuals to the development of this disease, which are amenable to modification, suggesting that there may be room for prevention through lifestyle modification (Flicker, 2010). Chapter 16 by Lam and Chan reviews successful interventions that prevent or delay cognitive decline by increasing physical exercises and/or intellectual activities. The impact of dietary patterns on cognition is also discussed. The emerging research focus on preventive lifestyle intervention for dementia is especially important as Asia, more so than any other part in the world, will experience a dramatic rise in dementia prevalence; the number of persons with dementia in Asia is expected to double in 15 years, with over 32 million cases by 2030 (Cheng & Zarit, 2013). Effective preventive lifestyle interventions may result in compression of morbidity and enable a longer active life expectancy (Cheng, *in press*).

In summary, this part examines the interconnection between physical and cognitive functioning, the trends in chronic illness and the implications for health and

social services, and the relationship between lifestyle (diet, physical and intellectual activities) and chronic diseases including Alzheimer's disease. Although some of these chapters are based heavily on a large volume of research conducted in Hong Kong Chinese older adults, the findings and messages are, for the most part, universal and applicable to other Asian societies. Special efforts to highlight the unique aspects in Asian societies, such as the preference for and the beneficial effects of tea (Yu et al., Chap. 13), are made. Of particular import are reviews of intervention programs to promote healthy aging in this area, some of which have just begun to emerge in the literature.

Emotional Resilience

While part 3 describes how an individual can maintain health and prevent diseases, part 4 reviews strategies that healthy older adults can employ to achieve successful aging. In this sense, this part aims at addressing the heterogeneity of successful aging. This part contains three chapters that examine successful aging in Asia from the perspective of the individual. Each chapter takes a cross-cultural approach, comparing the strategies that older adults in different countries (usually Asian countries relative to Western countries) use to maintain well-being despite physical declines and social losses (the so-called well-being paradox). Unlike the losses and declines associated with other aspects of aging, the socio-emotional aspect of aging is characterized by age-related stability or even improvement. Chapter 17, authored by Zhang and Ho, provides an overview on the many ways through which older adults enjoy a level of emotional functioning that is as high as, if not higher than, younger adults. The few studies on Asians (e.g., Chinese and Korean) suggest that older Asians also maintain their emotional functioning as well as their Western counterparts, but they may do so through different strategies. For example, while both Chinese and Germans increase the emotional closeness of their social networks with age, Chinese do so by increasing the number of family members and decreasing the number of acquaintances from their social networks but Germans do the opposite (Fung, Stoeber, Yeung, & Lang, 2008).

Chapter 18, authored by Yeung and Ho, focuses on the aging workforce. Despite cognitive and physical declines, both Western and Asian older workers manage to generally maintain their job performance through resource reallocation and regulatory behaviors (selection, optimization and compensation). They are also better at emotion regulation and conflict management than are their younger counterparts. However, cross-cultural differences occur in the specific strategies of emotion regulation and conflict management. For example, although emotional suppression, as an emotion regulatory strategy, is widely recognized to have negative outcomes in the Western literature (Gross & John, 2003), it has positive consequences for Chinese older workers (Yeung & Fung, 2012). While older Americans are generally more likely to use accommodating conflict management strategies and less likely to use competing conflict management strategies than are younger Americans

(Schieman & Reid, 2008), such age differences are not found among Chinese, as Chinese, regardless of age, prefer accommodating strategies to competing strategies (Zhang, Harwood, & Hummert, 2005).

The above two chapters have also suggested potential causes for the cross-cultural differences in emotional aging. These potential causes usually focus on the distinction in values between the East and the West. For example, East Asians are more interdependent in their self construal (Markus & Kitayama, 1991) than are North Americans. They may value relationship harmony more (Kwan et al. 1997) and thus prefer accommodating conflict management strategies to competing strategies (Zhang et al., 2005). Moreover, Asians are more family-oriented than are Europeans (Bond, 1991). This may explain why Chinese increase the number of family members and decrease the number of acquaintances from their social networks with age but Germans do the opposite (Fung, Stoeber et al., 2008). In addition, the findings that Asians are more likely to engage in dialectical thinking whereas North Americans and Europeans are more likely to engage in analytical thinking (Peng & Nisbett, 1999) have been used to explain why Americans show preferential cognitive processing of positive information with age but Chinese, regardless of age, show equal processing of positive and negative information (Fung, Isaacowitz et al., 2008). Similarly, the findings that Americans value high arousal positive affect but Chinese value low arousal positive affect (Tsai, Knutson, & Fung, 2006) may be a possible explanation for why emotional suppression (i.e. decreasing the arousal level of an emotion) has negative consequences for older Americans but positive consequences for older Chinese (Yeung & Fung, 2012). In short, it may well be the case that people in all culture prioritize emotionally meaningful goals and seek to optimize their emotional functioning with age (Carstensen, 2006). However, to the extent that people from different cultures define different goals as emotionally meaningful, they may use different strategies to optimize their emotional functioning with age (Fung, 2013).

Chapter 19, authored by Löckenhoff and colleagues, argues that we should go beyond an East-west distinction to examine cross-cultural differences in emotional aging. Löckenhoff and colleagues have demonstrated that many well known beliefs about East-west differences in attitudes toward aging and older adults (usually in terms of Asians having more positive attitudes than do people from the West) are not supported by empirical research. Rather, macro-level factors, such as modernization and intergroup (e.g., the young vs. the old) conflict predict attitudes toward aging and older adults more than values (such as filial piety) do (e.g., Binstock, 2010). Across 26 countries, Löckenhoff and colleagues (2009) also found that East-west differences in aging perceptions were fully explained by differences in population structure (e.g., the proportion of older adults in the population) but not differences in collectivism-individualism.

Taken together, the three chapters in this part suggest that people maintain their emotional functioning with age, and Asians do so as well as people from other cultures. However, in terms of the specific strategies used to maintain emotional functioning, older Asians may employ different strategies from those of their

Western counterparts. Moreover, there are instances in which the same strategy has different outcomes for older Asians relative to their Western counterparts. Many potential explanations for these cross-cultural differences in emotional aging have been proposed. Although most of the existing evidence attributes these cross-cultural differences in emotional aging to East-west distinction in values, more recent research suggests that macro-level factors may play a more important role. Future studies should continue to explore theoretically meaningful explanations for cross-cultural similarities and differences in emotional aging.

Conclusion

On the whole, this book takes advantage of the burgeoning field of gerontology in Asia and pulls together some of the most active researchers to identify major issues related to successful aging, at a time when East Asia is undergoing rapid demographic transformations. As our life span is extended, what is equally, if not more, important is the maintenance of quality of life for as long as possible. There is perhaps no policy question that is more important, yet elusive at the same time, than this one in the field of aging. Unlike the West which has undergone a long history of aging, however, Asia has had a relatively short history to tackle such issues (Cheng, Chap. 2) and, for one reason or another, research into successful aging has been rather lacking. For this reason, this book brings together scholars working in diverse fields and intends to summarize the major research findings on a wide range of issues and challenges related to successful aging in this part of the world, in the hope that more (intensive) research will be developed in the near future.

As a recent review (Cheng, Chan, & Phillips, 2008) has noted, it may not be appropriate for many developing countries in Asia to simply follow the paths of the West which has historically adopted high-end and high-cost models of social and medical services for older people. In fact, it is increasingly questioned whether many European countries can sustain such high-cost models given the economic downturn as well as continuous aging of the populations (European Commission, 2012). The recognition that the mainstream literature on successful aging may not be entirely relevant for this region, as well as the rapid population transitions being seen in many Asian societies, beg the question of successful aging in the Asian context. Asia is a rather heterogeneous continent in terms of socioeconomic development and population aging, and in this book, we shall focus on a few countries where population aging is happening more rapidly than the other regions. Most of these countries lie in East Asia. This focus on East Asia also reflects to some extent the extant literature on aging in general and successful aging in particular in the international literature. As scientists in the field of gerontology, we do recognize that the international literature remains largely the yardstick for acceptable scientific rigor. Nevertheless, where appropriate, we do endeavor to bring to the attention of

international readers literatures published in Asian languages that have not been accessible to the international research community before. Our aim is to highlight both similarities as well as differences in relevant issues between East and West.

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Part I
Social Contexts of Successful Aging

Chapter 2

Demographic and Family Trends in Asia

Sheung-Tak Cheng

The phenomenon of global aging has been called both a “triumph” and a “challenge.” As much as it is a triumph of medical advances and public health over diseases, injuries, and malnutrition in many parts of the world, it also presents enormous economic, social, and health-care challenges to societies to sustain support to older persons. Accelerated aging of the population is often seen during periods of high rates of socioeconomic development which gives rise to improvements in health care, hygiene, nutrition, living and working environment, and so on. As Asia has enjoyed rapid progress in socioeconomic development in recent decades, it is no surprise that Asia is a rapidly aging continent. As we will see, many countries in Asia have only a small window of opportunity to formulate their plans and policies on aging that are suitable to the situations of their societies.

In the following, I will provide an overview of the demographic situation in Asia as well as family changes that coincide with these demographic transitions. In the context of aging, socioeconomic development may be considered a “double jeopardy” in this region. Socioeconomic development accelerates population aging as well as erosion to traditional family structure and values, while the family has long been the first line of support for older people in these societies. Thus, it is important to have a grasp of these two simultaneous forces that impact on the social landscape of older persons in these societies. But because there is already a section devoted to families and social relationships as well as some introductory remarks in Chap. 1, the coverage here is meant to illustrate key trends and highlight relevant policy issues in ensuring family care to older persons.

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Demographic Trends

In 2010, 53.2 % of the world's population aged 65 or over was in Asia. An index of the pace of population aging is the time required to double the percentage of older people from 7 to 14. While this has taken many developed European and North American countries 60 to over 100 years (National Institute on Aging, 2007), the whole continent of Asia will accomplish this in less than 30 years from now (see Table 2.1) and we are witnessing the beginning of this transition! This pace of aging is similar to Latin America and the Caribbean (which includes South America), which is also experiencing fast population aging as a result of socioeconomic development. However, the size of the population makes Asia the main driver of global aging in the decades to come (Cheng, Chan, & Phillips, 2008; Cheng & Heller, 2009). Between 2010 and 2040, 66.5 % of the world's older population *increase* would be accounted for by Asia, and within Asia, 42.0 % of the increase would be accounted for by China alone.

Asia as a whole is not an “old” continent, relatively speaking. The overall life expectancy at birth remains a few years below those of Europe and North America. Even by 2040, life expectancy for men would be 4–6 years lower than those for Europe and North America, and that for women was 6–7 years lower (Table 2.1). However, Asia is a vast continent and the pace of population aging varies a lot across countries due to differences in socioeconomic development. I follow United Nations mapping and present demographic figures for the four Asian regions in Table 2.2. Eastern Asia, which includes Japan, is noticeably “older” than the other regions. This region, including also China, the most populous country in the world that is undergoing rapid population aging (Population Reference Bureau, 2010), has more older persons than the rest of Asia combined. By 2040, Eastern Asia will have 385 million older persons, equaling the total of Europe, North America, and Latin America and the Caribbean combined. In terms of proportion, Eastern Asia will have 24.2 % of its population aged 65 or over by 2040 and be one of the oldest regions in the world (the other one being Europe where population aging has started much earlier).

Compared to Eastern Asia, South-Eastern Asia is a much smaller region. Yet, it shares with Eastern Asia as having more accelerated aging than other areas. In 2040, the proportion of population aged 65 or over will be roughly 2.5 times the figure in 2010 for these two regions, compared with more modest increases in South-Central (India included) and Western Asia. Within Eastern and South-Eastern Asia, China is expected to double the proportion of people aged 65 years or over, from 7 to 14 %, within a 26-year time span (2000–2026); Thailand, 22 years (2003–2025); Singapore, 19 years (2000–2019); and South Korea, 18 years (2000–2018; see National Institute on Aging, 2007; U.S. Bureau Census, n.d.). Japan, being one of the oldest countries, had accomplished this aging phenomenon between 1970 and 1996. Taiwan, for which data are not available in the United Nations database (hence not listed in Table 2.3), is also experiencing rapid aging; people aged 65 or over accounted for 10.9 % of the population in 2011, increasing to 20.1 % in

Table 2.1 Aging in a global context: Demographic characteristics by continents

	Africa			Asia			Europe			Latin America and Caribbean			North America			Oceania		
	2010	2025	2040	2010	2025	2040	2010	2025	2040	2010	2025	2040	2010	2025	2040	2010	2025	2040
Median age	19.7	21.8	24.5	29.2	33.9	38.6	40.1	43.8	46.4	27.6	32.8	37.9	37.2	38.9	40.1	32.8	34.8	37.0
Total fertility rate ^a	4.37	3.59	3.03	2.18	1.99	1.90	1.59	1.76	1.89	2.16	1.89	1.79	2.04	2.06	2.07	2.45	2.36	2.24
Life expectancy at birth ^a																		
Male	56.1	60.8	64.8	68.5	71.6	73.9	72.8	75.9	78.1	71.6	74.3	76.4	76.4	78.4	80.2	75.5	78.0	79.8
Female	58.7	64.1	69.0	72.4	75.8	78.2	80.2	82.3	84.1	77.8	80.3	82.2	81.5	83.5	85.2	79.9	82.3	84.1
Number ages 65+ ('000,000 s)	36.0	59.9	98.2	279.1	478.5	772.9	119.4	153.3	182.8	40.7	70.5	114.1	45.3	71.7	90.5	3.9	6.3	8.9
M:F ratio	1:1.2	1:1.2	1:1.2	1:1.2	1:1.2	1:1.2	1:1.5	1:1.4	1:1.4	1:1.3	1:1.3	1:1.3	1:1.3	1:1.2	1:1.2	1:1.2	1:1.2	1:1.2
% of total population	3.5	4.2	5.3	6.7	10.1	15.3	16.2	20.6	25.0	6.9	10.4	15.5	13.2	18.4	21.3	10.7	14.1	17.2
Number ages 80+ ('000,000 s)	4.4	7.9	15.3	47.2	80.9	158.9	30.9	39.1	57.1	8.5	14.9	28.8	13.2	16.9	34.8	1.0	1.5	2.7
M:F ratio	1:1.4	1:1.5	1:1.5	1:1.5	1:1.5	1:1.5	1:2.1	1:1.8	1:1.7	1:1.6	1:1.5	1:1.5	1:1.8	1:1.6	1:1.5	1:1.6	1:1.4	1:1.4
% of total population	0.4	0.6	0.8	1.1	1.7	3.1	4.2	5.3	7.8	1.4	2.2	3.9	3.8	4.4	8.0	2.8	3.4	5.3
Old age dependency ratios	6	7	9	10	15	23	24	32	42	11	15	24	20	30	35	16	22	28

Note. All figures were extracted from United Nations Population Division (n.d.)
^aData reported here were displayed on the United Nations database as corresponding to the intervals 2010–2015, 2025–2030, and 2040–2045 respectively. Data for individual years were not available

Table 2.2 Demographic characteristics by regions in Asia

	Eastern Asia			South-Eastern Asia			South-Central Asia			Western Asia		
	2010	2025	2040	2010	2025	2040	2010	2025	2040	2010	2025	2040
Median age	35.5	41.0	46.9	27.5	32.9	37.9	24.7	29.4	34.2	24.9	29.1	32.9
Total fertility rate ^a	1.6	1.6	1.7	2.1	1.9	1.8	2.6	2.2	1.9	2.9	2.5	2.3
Life expectancy at birth ^a												
Male	73.0	75.3	77.2	68.8	72.4	74.8	64.7	68.2	71.0	71.0	73.7	76.1
Female	77.3	79.9	81.7	73.3	77.2	79.7	67.8	71.8	74.9	75.3	78.1	80.3
Number ages 65+ ('000,000 s)	149.8	250.7	384.5	33.2	61.3	107.4	85.1	146.4	244.2	11.0	20.1	36.7
M:F ratio	1:1.2	1:1.2	1:1.2	1:1.3	1:1.2	1:1.2	1:1.1	1:1.1	1:1.2	1:1.3	1:1.2	1:1.1
% of total population	9.5	15.4	24.2	5.6	9.0	14.5	4.8	6.9	10.3	4.7	6.7	10.2
Number ages 80+ ('000,000 s)	28.3	47.5	88.4	5.1	9.5	21.4	12.0	21.1	42.4	1.8	2.9	6.6
M:F ratio	1:1.6	1:1.7	1:1.5	1:1.5	1:1.6	1:1.5	1:1.2	1:1.3	1:1.4	1:2.1	1:1.7	1:1.6
% of total population	1.8	2.9	5.6	0.9	1.4	2.9	0.7	1.0	1.8	0.8	1.0	1.8
Old age dependency ratios	13	22	39	8	13	22	8	10	15	7	10	15

Note. All figures were extracted from United Nations Population Division (n.d.)
^aData reported here were displayed on the United Nations database as corresponding to the intervals 2010–2015, 2025–2030, and 2040–2045 respectively.
Data for individual years were not available