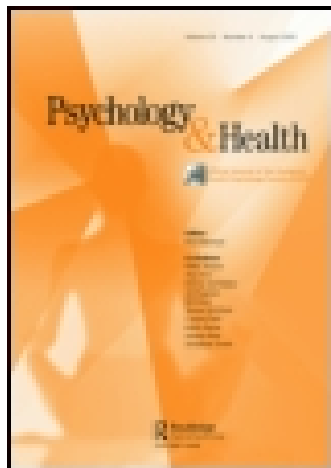


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### Editorial: Psychosocial Factors in Healthy Ageing

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## Editorial: Psychosocial Factors in Healthy Ageing

While many people will function well and live independently into advanced old age, major acute health events, chronic disease and disability are prevalent in later life.

Understandably, therefore, a core social policy priority in many developed countries is to contain the health and social care costs associated with later life through the promotion and maintenance of health in the older population. This policy agenda commonly manifests in political, academic and popular discourse in the terms of *healthy ageing*.

Health psychology, as the core scientific discipline concerned with human behaviour related to health, should be perfectly placed to make a considerable contribution to the healthy ageing policy agenda. Health psychology has a solid foundation in theory and evidence, and this foundation should be able to shape the debate and future discourse around healthy ageing. However, while gerontology and geriatrics, sociology, and the cognitive sciences have all strongly contributed to the debate about what constitutes healthy ageing and its determinants, the contributions from health psychology, particularly to theory- and evidence-based fostering of healthy ageing, have so far been limited (FUTURAGE Group, 2011). The purpose of this special issue of *Psychology & Health* is therefore to bring together new theoretical and empirical contributions on healthy ageing from within the field of health psychology, in an endeavour to harness the undoubted expertise available and enhance the profile of health psychology on this important topic. Before we introduce you to the articles in this special issue however, allow us to take a detour to consider the concept of and evidence-base for healthy ageing, first so that the articles collected for this issue are properly contextualised, and second to consider in more detail the potential contribution of health psychology to this area. To inform this editorial, we performed a structured review of the scientific literature for the years 2000–mid 2014, using the search term ‘healthy ageing/aging’ combined with ‘older people’ and equivalent terms, also using conceptually overlapping terms to healthy ageing

such as ‘successful ageing’ and ‘active ageing’. Following a review of identified abstracts, full articles on the topic of the review were obtained and read. As the title of our special issue would suggest, we will focus on psychosocial factors in healthy ageing, and thus environmental factors, biological and genetic factors, macro-level factors, meso-level factors and cultural factors will not be addressed in any detail, nor will we for the most part take a lifespan or life course perspective.

### **What is Healthy Ageing, Anyway?**

One of the main problems when considering the research evidence on healthy ageing is that there is no consensual definition of the term, although definitions are plentiful in the academic and policy literature and many share common features. For example, the Swedish National Institute of Public Health defines healthy ageing as “The process of optimising opportunities for physical, social and mental health to enable older people to take part in society without discrimination and to enjoy an independent and good quality of life.” (Swedish National Institute of Public Health, 2007, p. 16). While it would be an overstatement to describe this definition as “typical”, it displays a characteristic common to many definitions of healthy ageing, wherein the concept is presented as inclusive of most aspects of the life of an older person.

The problem of a lack of a consensual definition for healthy ageing is made more significant by the fact that a number of other terms appear to occupy the same conceptual territory. One of these terms is *successful ageing*, which has been in use since the 1960s, and is the most commonly used of all the terms that orbit the notion of healthy ageing (Hung, Kempen, & De Vries, 2010). The most seminal – but certainly not only - definition of successful ageing is that it is a “low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life.” (Rowe & Kahn, 1987, see Figure 1; Rowe & Kahn, 1997).

Figure 1 about here

In the wake of Rowe and Kahn's work, other terms emerged in the literature that overlap the territory of healthy ageing: *productive ageing* was offered partly as a rebuttal to the notion that ageing should be qualified by, and quantified in terms of, success (Butler, Oberlink, & Schechter, 1990), and this term itself evolved into *active ageing*, conceived in terms of "creating opportunities for staying longer on the labour market, for contributing to society through unpaid work in the community [...] and for living autonomously and in dignity for as much and as long as possible [...]" (European Council, 2010, p.5). The terms active ageing and healthy ageing are often used conjointly in discourse (Walker & Maltby, 2012), thus exacerbating the confusion about where the territory of one term ends and the territory of the other begins. A further term, *optimal ageing*, refers to a model that is often presented as an alternative to successful ageing. As theorised by Baltes and Baltes (1990), optimal ageing is promoted through selection, optimisation, and compensation (SOC): the selection of appropriate goals and the direction of personal resources to those goals; the optimisation of the performance of behaviours directed towards those goals; and the deployment of strategies that compensate for ageing-related losses. In some ways, for example in the way the model is expressed so as to readily set up a series of testable hypotheses, the SOC model is superior to Rowe and Kahn's model of successful ageing. However, SOC should perhaps not be seen as an alternative model to successful ageing but rather as a complementary model that outlines processes whereby optimal outcomes can be achieved in the context of ageing

### **We Know Where We're Going But We Don't Know Where We've Been.**

Given the historical primacy and current dominance (certainly in American research) of the successful ageing model, it is important to examine the model in some detail if we are to place a model of healthy ageing in relation to it. Rowe and Kahn (1987) offered the idea of

successful ageing as a break from the traditional research approach to ageing and old age in which efforts were focused on understanding pathological processes. They suggested that researchers instead should seek to understand the factors that distinguish those individuals who function particularly well (successfully) in later life from those that, while non-diseased, exhibit the (usual) risk for decline in function that accompanies ageing. Rowe and Kahn suggested that even if many of the functional decrements associated with ageing were common, it was wrong to consider them “normal”, and they challenged researchers to develop interventions to target the modifiable factors that they argued were the primary cause of such decrements.

Rowe and Kahn’s (1987; 1997) original formulation of successful ageing has met with some strident criticism, and it has been argued that it fails to meet certain criteria for what might be thought of as an ideal model, perhaps most succinctly described by Bowling (2007): “A model of successful aging needs to be multi-dimensional, incorporate a lay perspective for social significance, use a continuum rather than dichotomous cut-offs for ‘success’ and lack of, and distinguish clearly between predictor and constituent variables.” (p. 263). However, on careful inspection, Rowe and Kahn’s model actually meets most of Bowling’s criteria. It is a multi-dimensional model which has no cut-offs for categorising success and in which constituent variables are clearly described. It is true that the model has been used to categorise older people as successful or “unsuccessful” in their ageing (as in the MacArthur studies, see for example Albert et al., 1995). However there is no requirement that the model be used to categorise individuals, as the components are described in relative terms: “a low probability of disease [...] high cognitive and physical functional capacity” (Rowe & Kahn, 1997, p.433). Furthermore, Rowe and Khan describe the conditions of “successful” and “unsuccessful” ageing as not fixed but transitional, as people can move “in and out of success” (Rowe & Kahn, 1997, p.439), as for example when recovery from negative health events is facilitated

by psychological resources such as resilience (cf. Hicks & Conner, 2014). Thus, successful ageing is not necessarily or entirely a state model of ageing, as it is often perceived to be, as it also contains elements one would associate with a process model.

With regard to the model failing to incorporate a lay perspective, the argument normally runs that the successful ageing model emphasises health whereas lay definitions emphasise relationships and activity. Yet Rowe and Khan explicitly point to a hierarchy within their model whereby active engagement is given primacy: “[...] successful aging is more than the absence of disease [...] and more than the maintenance of functional capacity [...] it is their combination with active engagement with life that represents the concept of successful aging most fully.” (Rowe & Kahn, 1997, p. 433). So in truth, this proposed difference between academic and lay model content is exaggerated. The criticism that successful ageing lacks a lay perspective is often conflated with a different, but related criticism of the model, which is that it does not contain a subjective component. The need for a lay perspective relates to model content, whereas the need for a subjective component relates to model measurement. For example, Pruchno and colleagues (Pruchno, Wilson-Genderson, & Cartwright, 2010) proposed a two-factor model of successful ageing, containing objective and subjective components, in which the subjective component is operationalised via three items measuring a person’s evaluation of how successfully they have aged. It is true that Rowe and Khan’s model of successful ageing lacks a specification for subjective measurement of its components, and this is a particular concern when one considers that objective measures of personal relationships and productive activity (the sub-elements of the component of active engagement) are unlikely to capture adequately the full influence of such factors for successful ageing without the aid of a subjective anchor. Subjective health has also been shown to strongly influence morbidity and mortality (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Benyamini, 2011), and therefore an

absence of subjective evaluations of physical and psychological health within the model likely limits its explanatory power.

### **What Should an Ideal Model of Healthy Ageing Look Like?**

How should we then see a model of healthy ageing against the backdrop of successful ageing, and other concepts such as active ageing? If healthy ageing is to be meaningful and measurable, we must draw back from the temptations offered by expansive definitions of health and constrain ourselves to addressing concrete elements of physical and psychological health, very much as manifested by the components of low probability of disease and disability and high cognitive and physical functional capacity contained within Rowe and Kahn's (1987) successful ageing. Active ageing, on the other hand, would appear to map onto the active engagement component of successful ageing. Thus, in simple terms, it could be said that conceptually:

*Successful ageing = active ageing + healthy ageing.*

Following this formalisation of healthy ageing as comprising physical and psychological health components, what might we consider as objective and subjective indicators of healthy ageing? Indicators of physical health need to include objective and subjective health status, health-related quality of life, objective and subjective physical functioning, and morbidity; while indicators of psychological health would include life satisfaction and well-being, positive and negative affect, psychological morbidity, and objective and subjective cognitive functioning. This list of indicators is not meant to be exhaustive but selective, with indicators chosen on the grounds that general agreement exists as to their meaning and reliable instruments exist by which they can be measured. On these grounds, other often used indicators of healthy ageing would be excluded, for example multidimensional quality of life, mortality and longevity. Quality of life is excluded as it is a higher-order construct than healthy ageing, and the key relationship between the two is most



astutely pinpointed by Bowling and Iliffe (2011) when they argue that for any model of successful/healthy ageing to have validity, it must strongly relate to quality of life. Mortality and longevity are excluded not because we suppose one could be said to be ageing healthily if one is dead or had never reached old age in the first place, but rather because factors that influence the quality of life experienced are not necessarily the same as factors that influence the length of life lived, and healthy ageing as a construct primarily concerns the former whereas mortality and longevity are indicators of the latter.

Finally, extensive research has demonstrated the intimate relationship between physical and psychological health, both in the general population and among older people. Some recent studies employing longitudinal designs demonstrate that: everyday cognition predicts self-reported instrumental activities of daily living (Yam & Marsiske, 2013); better memory predicts less functional limitation in both young-old and old-old groups (Infurna, Gerstorf, Ryan, & Smith, 2011); high levels of baseline physical capability predict well-being at 5-10 year follow-up (Cooper et al., 2014); and trajectories of physical functioning, mental health, and life satisfaction in later life are associated (Hsu, 2009). So, there is a requirement in this model of healthy ageing that a bi-directional relation exists between the components of physical and psychological health.

### **What are the Main Determinants of Healthy Ageing?**

Somewhat surprisingly, given that there is little consensus in the research literature as to what healthy ageing actually is, there appears reasonable agreement concerning its determinants. The Swedish National Institute of Public Health carried out a scoping exercise among European experts, and concluded that the “cornerstones” (Swedish National Institute of Public Health, 2009, p. 26) of healthy ageing were physical activity and healthy eating, social interaction and a sense of meaningfulness, and a sense of personal control and empowerment. There is considerable overlap between these factors and those proposed by

Peel and colleagues (Peel, McClure, & Bartlett, 2005) in their review of the determinants of healthy ageing: smoking status, physical activity level, body mass index (BMI), diet, alcohol use, and health practices. Social interaction and perceived control do not feature on this second list, but interpersonal factors are mentioned in other related reviews, such as Stuck and colleagues' (Stuck et al., 1999) review of the predictors of functional status decline which identified high or low BMI, low level of social contacts, low level of physical activity, no alcohol consumption, smoking, and visual impairment as key factors. A crucial feature of these reviews is the prominence of health behaviours such as physical activity, diet, smoking and alcohol consumption. In the following section of this review we will consider recent evidence supporting the role of physical activity and eating behaviour in determining healthy ageing, as well as the evidence for the roles of social interaction and perceptions of control. We will not review the evidence for the roles of smoking or alcohol consumption, as their status as addictive behaviours and their strong influence on mortality requires a deeper analysis of their effects on healthy ageing than is possible in the space available to this editorial.

**Physical activity.** There is compelling evidence indicating that physical activity has a major role in determining healthy ageing. Recent research shows that physical activity is associated with or predicts: lower limb functioning (Trayers et al., 2014); changes in muscle strength related to functioning (Crane, MacNeil, & Tarnopolsky, 2013); a high health-related QoL trajectory in women with healthy baseline status (Dale et al., 2013); faster response times and reduced prefrontal cortex activity, the latter being implicated in motion inhibition (Berchicci, Lucci, & Di Russo, 2013; Berchicci, Lucci, Perri, Spinelli, & Di Russo, 2014); and better self-reported memory in both middle-aged and old-aged people (Small et al., 2013). Reviews provide strong evidence that physical activity is related to well-being (Windle, Hughes, Linck, Russell, & Woods, 2010) and to global cognitive function in people with

Alzheimer's disease (Farina, Rusted, & Tabet, 2014). There is also evidence, although more limited, that physical activity is related to cognitive function in people with mild cognitive impairment (Gates, Singh, Sachdev, & Valenzuela, 2013). Finally, results from the English Longitudinal Study of Ageing show that a construct of healthy ageing, indicated by an absence of chronic diseases, depression, and impairment, is predicted by physical activity (Hamer, Lavoie, & Bacon, 2014).

Of course, there are problems and controversies within the evidence, and questions that require more research in order to provide adequate answers. Given that physical activity is actually an umbrella term for an enormous range of actions, a critical issue is whether there are minimal and optimal levels of activity that benefit healthy ageing? Many different recommendations for activity levels circulate within the literature, including those of 10,000 steps a day or around 7km, and two sessions of activity weekly each lasting forty-five minutes (cf. Hammar & Ostgren, 2013). A related problem is where physical activity ends and physical exercise begins. To McMurdo (2007) the difference between the two constructs is quite clear: "Exercise is a subset of physical activity and is defined as planned, structured, repetitive movement done with the express purpose of improving or maintaining physical fitness." (p. 18). It is rather rare for studies to explicitly address the differential impact of exercise and activity on healthy ageing outcomes, but research suggests that targeted exercise improves balance and bone mass more than activities such as cycling and walking (cf. Hammar & Ostgren, 2013). Other details that need consideration in order to determine the specific effects of exercise on healthy ageing include the intensity and volume of training (Raymond, Bramley-Tzerefos, Jeffs, Winter, & Holland, 2013). Finally, is it activity and exercise or sitting down that has the most significant role in healthy ageing, given recent research that suggests that sedentary behaviour has a large and detrimental effect on health (Thorp, Owen, Neuhaus, & Dunstan, 2011)?

**Diet and nutrition.** In a recent review, Hammar and Östgren (2013) outline the main dietary and nutritional factors in healthy ageing. These include avoiding obesity and maintaining a Mediterranean diet, which effect morbidity, malnutrition and its role in sarcopenia, as well as deficiency in vitamins B12 and D, implicated in cognitive impairment and a variety of conditions. Recent research has demonstrated effects of diet and nutrition on: psychological distress (Hodge, Almeida, English, Giles, & Flicker, 2013); cognitive performance and total brain volume (Titova et al., 2013); hand grip strength, although not functioning (Neville et al., 2013); functional performance (Tieland, Brouwer-Brolsma, Nienaber-Rousseau, van Loon, & De Groot, 2013), although this effect was not obtained in work by Mathei and colleagues (Mathei et al., 2013); and self-reported memory (Small et al., 2013).

Different dietary and nutritional factors have interactive effects on healthy ageing outcomes, of course, and disentangling the paths of influence specific to each factor and each combination of factors is hugely challenging. Our understanding of the social factors linked to healthy eating also remains poor. For example, differences in diet and nutritional status are linked both to the availability of material resources, such as access to shops and cooking facilities, and how such resources are linked to individual preferences and perceptions, such as appetite and food-based knowledge (Payette & Shatenstein, 2005; Dean, Raats, Grunert, & Lumbers, 2009). Age itself is a moderating factors in how certain food-related factors, such as variety, influence eating behaviour (Remick, Polivy, & Pliner, 2009), but there is a lack of research on eating behaviour in older populations, and especially research that locates eating behaviour as a social and meaningful activity (Sahyoun & Zhang, 2005; Carrier, West, & Ouellet, 2009; Locher et al., 2009).

**Social interaction.** Recent research points to the considerable importance of social interaction for healthy ageing. Higher levels of social interaction were found in older people

who occupied a persistently healthy ageing trajectory relative to those on a declining trajectory (Chang, Lu, Lan, & Wu, 2013). Levels of social interaction have been shown to be associated with self-rated health (Ichida et al., 2013) and well-being (Yip, Leung, & Huang, 2013), although an effect of social interaction on life satisfaction was moderated by factors such as education, health status, and access to resources (Moor, de Graaf, & Komter, 2013).

However, social interaction relates to an extremely broad body of work, with many overlapping and related constructs in the literature. For example, social contact, social activity, social integration, social engagement, social participation, and social support have all been examined for their potential to influence healthy ageing. Huxhold and colleagues (Huxhold, Fiori, & Windsor, 2013) found that changes in social engagement predict changes in life satisfaction, positive affect, and functional and subjective health, whereas changes in emotional support predict changes in negative affect. Few other studies have attempted to explore the impact of different social interaction constructs on healthy ageing, with the consequence that it is difficult to determine what forms of social interaction might be most important for older people. The situation is made more complex by the many different ways in which the various constructs are measured. Measurement can relate frequency, quantity, density, quality, type and/or purpose: so, the quality of social contact has been found to be more important than the quantity of social contact when considering its effect on well-being (Pinquart & Sörensen, 2000; Litwin & Shiovitz-Ezra, 2006). Measurement can also be objective or subjective: so, loneliness has been found to be a risk factor for the development of Alzheimer's disease independent of actual social contact as measured by level of social isolation (Wilson et al., 2007). Then there is the issue of with whom one should interact socially in order to gain the greatest benefits for healthy ageing. There is increasing evidence for differential effects of social interaction with differing partners, for example Huxhold and colleagues (Huxhold, Miche, & Schüz, 2014) have demonstrated that spending time with

friends increased positive affect and decreased negative affect, while spending time with family increased both positive and negative affect.

**Perceptions of control.** It seems scarcely necessary here to rehearse the evidence-base for the influence of *perceptions of control* on health. By perceptions of control we mean optimistic self-beliefs about agency and being able to follow through a course of action despite obstacles. This includes both general and behaviour-specific perceptions of control, and for the sake of brevity, we also subsume constructs such as mastery and self-efficacy under this label. Such perceptions of control have been implicated in myriad aspects of health and illness, but there is comparatively less research on the influence of perceptions of control on healthy ageing in real-world settings among older people. The MacArthur Studies of Successful Aging found that self-efficacy predicted the maintenance of cognitive function in high-functioning older people (Albert et al., 1995). More recently, work with older people has shown that a sense of helplessness predicts incident hypertension (Stern, Dhanda, & Hazuda, 2009), while control beliefs predict physical and self-rated health as well as functional status, in particular in older adults with lower socioeconomic resources (Schoellgen, Huxhold, Schuz, & Tesch-Romer, 2011). Similarly, control beliefs have been shown to predict self-reported health and hospital admissions (Chipperfield et al., 2012), while self-efficacy predicts well-being at one-year follow up (Tovel & Carmel, 2014).

Given that perceptions of control are central to many theories used in Health Psychology, research on its role for the healthy ageing process seems a further avenue where Health Psychology could play a more prominent role.

### **Towards a Model of Healthy Ageing.**

This proposed list of determinants of healthy ageing might be taken as implying that their effects operate independently, but this is clearly not the case. These determinants of healthy ageing also determine each other. So, physical activity and exercise are increased by

active social networks (Leroux, Moore, Richard, & Gauvin, 2012) and family support (Yuan et al., 2011), while physical activity has been demonstrated to influence appetite (Shahar et al., 2009) and the consumption of a healthy diet (Blakely, Dunnagan, Haynes, Moore, & Pelican, 2004). Similarly, diet and eating behaviour have been shown to be associated with the quantity of social contact (Sahyoun & Zhang, 2005), the social ambience of the eating environment (Carrier et al., 2009) and to differ between formal and informal carers (Locher et al., 2008). Given that the determinants of healthy ageing each affect the other, there is much work to be done to clarify how each determinant exerts its effect on healthy ageing, i.e., directly or indirectly through the other determinants. Perceptions of control are often conceptualised as acting on relationships between two or more variables as moderators or mediators. For example, the strength and shape of the relationship between physical activity and well-being has been shown to be moderated by self-efficacy (McAuley, Elavsky, Jerome, Konopack, & Marquez, 2005). Other factors have been shown to mediate the main determinants' effects on healthy ageing. For example, while physical activity no doubt has direct benefits for health, some of that benefit is likely to accrue as a result of the effect physical activity has in reducing negative health events such as falls (Peel, McClure, & Hendrikz, 2007; Power & Clifford, 2013). The beneficial effect of physical activity in healthy ageing might also arise partly through the way it influences the relationship between physical and mental health, as demonstrated by research that indicates how physical activity moderates the effect of depression on disability (Lee & Park, 2008).

Figure 2 provides a diagram of an integrative model of healthy ageing, representing the main determinants and their direct and indirect effects on the components of healthy ageing. Perceptions of control are given a central place in the model, hypothesised to have a significant role in moderating/mediating the effects of the other determinants on physical and psychological health, as well as having additional direct influence. Healthy ageing is

conceived as both a state and a process, and as such physical and psychological health are represented as having effects on the main determinants just as the main determinants influence the two components of health.

Figure 2 about here

### **The Road Less Travelled.**

To offer a model of healthy ageing incorporating just four main determinants is, undoubtedly, to ignore the considerable evidence that points to the importance of other factors for healthy ageing. However, for one reason or another, the contributions of these other factors tend not to be emphasised in the literature to the same degree as the main determinants mentioned above.

Beyond the four main determinants of ageing, arguably the most important influence on healthy ageing is sleep. Sleep degrades with ageing, although approximately 50% of the insomnia found in older people originates in mid-life and migrates into later life (Morgan, 1992). Sleeping for less than seven hours per night with more than two hours of wakefulness has been shown to be associated with reduced functional performance (Reyes, Algarin, Bunout, & Peirano, 2013), while  $\leq 6.5$  hours sleep per night predicts cognitive decline (Keage et al., 2012). However, self-reported sleep durations of greater than nine hours also predict decline in high-level functioning (Tsubota-Utsugi et al., 2011), while an increase in sleep duration in older people (from 7-8 hours to 9 or more) is linked to poor cognition (Loerbroks, Debling, Amelang, & Sturmer, 2010). Impaired sleep-wake cycles are also associated with cognitive impairment, disability, depression, and increased falls (Anderson et al., 2014), although daytime naps have been found to reduce the risk of cognitive decline (Keage et al., 2012). Related to sleep, subjective fatigue was found to predict cognitive and everyday functioning over a five year period (Lin, Chen, Vance, Ball, & Mapstone, 2013). Why the significance of sleep for healthy ageing is not more widely recognised is puzzling; sleep is



certainly a health behaviour, but it is not often so considered in the psychological literature, and much of the research on sleep is published in specialist journals.

Certain dispositions appear related to healthy ageing. Optimism has been shown to predict less loneliness in older men independent of levels of depression or changes in social networks (Rius-Ottenheim et al., 2012), while fatalism predicts greater difficulty in everyday cognition and illness at 20 years follow-up (Caplan & Schooler, 2003). While understanding the direct influence of dispositions on healthy ageing has value, dispositions are not amenable to change in the same way as health behaviours, and therefore cannot be readily incorporated into interventions other than in the identification and definition of target populations. Understanding the role of dispositions as factors that moderate the recovery process following negative health events during later life is, however, important if interventions are to be as effective as possible. Within ageing research, resilience is a one disposition that has been the subject of considerable attention, defined as “the rapidity and completeness with which people recover from [stressful life events] and return to meeting the criteria of success[ful ageing].” (Rowe & Kahn, 1997, p. 439). However, when examining the use of resilience in the literature the true substance of the construct is hard to pin down, being theorised both as trait and psychological process, having conceptual (and operational) overlap with Antonovsky’s (1979) sense of coherence theory, and variously characterised in terms of coping, hardiness, and self-esteem (Hicks & Conner, 2014) or as the outcome of a process of adaptation over the life course (Jopp & Rott, 2006).

Stressful life events associated with later life, such as widowhood and retirement, are known to impact on healthy ageing. As one reaches old age, the loss of members of one’s peer group and social network through bereavement becomes a more frequent occurrence, and these losses and, especially, the loss of one’s life partner can have substantial negative impacts on health, including increased sleep problems, loss of appetite, fatigue, and

depression (Naef, Ward, Mahrer-Imhof, & Grande, 2013). The literature on widowhood and retirement exists largely distinct from that on healthy ageing, and neither life event is subject to much research within Health Psychology; so there is integrative work required here.

Health psychologists, perhaps unsurprisingly, are more active when it comes to researching stressful life events such as negative health events. Negative health events are a significant catalyst for how a healthy and active older person, inhabiting the benign, post-retirement social environment of Laslett's (1991) Third Age, can transit with relative suddenness into a state of dependence and frailty, becoming an inhabitant of the Fourth Age. Drawing primarily on studies on falls in older people, McKee (1998) labelled the process of decline following a negative health event in late life as the *body drop*, hypothesising several psychological processes that might explain this decline. McKee demonstrated that a hopelessness attributional style moderates recovery post-fall, where attributing a fall to a stable and global cause – often 'old age' (cf. Weinberg & Strain, 1995) – results in poorer functioning than when a fall is attributed to other forms of causation (McKee & Gott, 2002; McKee, Orbell, & Morgan, 2001). Work by other researchers on different populations and with larger samples endorses the idea that attributional processes can play an important role in recovery from negative health events, particularly where the older person sees old age as the cause of the event or related symptoms (Gump et al., 2001; Stewart, Chipperfield, Perry, & Weiner, 2012). It has been argued (McKee, 1998; McKee & Gott, 2002) that the decline in functioning following the health event endures because the negative health event precipitates a change in an older person's self-perception: the person no longer sees him or herself as simply ageing but rather as "being old", and thus susceptible to representations of old age characterised by dependency and frailty rather than independence and agency.

The arguments within the body drop theory resonate with those found in an area of research to which social and health psychologists have made a substantial contribution,

namely that of self-perceptions of ageing (SPA). People's perceptions of themselves and others arise partly through the internalisation of stereotypes prevalent in society (Rothermund & Brandstädter, 2003; Levy, 2009). Extensive research has demonstrated that negative stereotypes of ageing and older people are more common than positive stereotypes (cf. Kite, Stockdale, Whitley, Jr., & Johnson, 2005), and thus it is not surprising that older people and ageing are often perceived negatively, and that older people often hold negative perceptions of their own ageing. Levy has conducted numerous studies that demonstrate that holding negative stereotypes of older people and ageing has detrimental effects on health (e.g. Levy, 1996; Levy, Slade, May, & Caracciolo, 2006), and her work has been replicated by others (e.g. Palacios, Torres, & Mena, 2009) and extended to encompass work on stereotype threat and social comparison processes (Barber & Mather, 2013; Swift, Lamont, & Abrams, 2012). Similarly SPA have been shown to influence physical health (Wurm, Tesch-Romer, & Tomasik, 2007), self-reported (subjective) health and life satisfaction (Wurm, Tomasik, & Tesch-Romer, 2008) and physical functioning (Sargent-Cox, Anstey, & Luszcz, 2012). A recent study that integrated SPA with SOC theory (Wurm, Warner, Ziegelmann, Wolff, & Schuz, 2013) found that following a negative health event, older people demonstrated higher levels of SOC strategies oriented to the goal of a healthy lifestyle. However, this effect was moderated by SPA, with people having more negative SPAs also having lower levels of SOC strategies. More negative SPA and negative stereotypes of ageing were also found to predict lower self-rated health and life satisfaction. Other recent work on SPA also indicates that interventions targeting misconceptions in negative views on ageing combined with prompts to replace negative interpretations of ageing with neutral or positive ones can increase physical activity in older adults, thus providing the first experimental evidence for the importance of self-perceptions of ageing for healthy ageing (Wolff et al., 2014). Still other work indicates that optimism moderates the impact of SPA on health (Wurm & Benyamini, 2014).

### **Is Healthy Ageing Meaningful for the Oldest Old?**

A particularly contentious issue within healthy ageing research is what healthy ageing means in relation to the oldest old (commonly understood to be those aged 80 or older). The issue of whether advanced age impacts upon healthy ageing is not so problematic *per se*, rather that many advocates for older people (including among their number some researchers on healthy ageing) make the argument that current conceptualisations of healthy ageing are discriminatory toward frail older people, and so should not be applied. Hicks and Conner (2014) offer a similar viewpoint when they propose that a model of *resilient ageing* is a better fit for the realities of later life than healthy ageing, wherein resilient ageing addresses the adversities that older people face when ageing.

Yet there is evidence that healthy ageing continues into advanced old age. Jopp and Rott (2006) found that resilience and self-regulation processes were linked to happiness in a sample of centenarians, while Langlois and colleagues (Langlois et al., 2013) showed that exercise had benefits for physical capacity and cognitive performance in frail and non-frail older people alike. Other work suggests that social relationships are associated with indicators of successful ageing in people with dementia (Livingston, Cooper, Woods, Milne, & Katona, 2008). Partly, the issue of whether a model of healthy ageing can be applied to people in advanced old age depends on how one operationalises the model. If healthy ageing is seen as an absolute state, obtained only when certain criteria are reached, then it is true that as people become more frail, they will increasingly struggle to fulfil those criteria, and thus fail to age “healthily”. However, if healthy ageing is a relative state, where the standards expected of an individual are grounded in that person’s current circumstances, then it can apply to all people regardless of age, as even at advanced ages gains in physical and mental health are possible, if not always easily achieved. If we consider healthy ageing a process, then that general process can apply in both the young-old and old-old, while allowing for some differences between the

two sub-groups of older people in how the process works. In addition, by acknowledging the role of control beliefs for healthy ageing, compensation for declining functional capacities can be made: if, despite objective functional limitations, individuals exert control and retain a sense of autonomy in making decisions and setting the course of their everyday lives (Schwarzer et al., 2012), then this sense of control might compensate for objective functional state and still enable individuals to participate in everyday life. As Boudiny (2013) argues “Even the mere act of decision-making may be a way for the heavily dependent to remain engaged with life” (p. 1091). With increasing frailty an older person moves from being independent to dependent, and supporting an older person’s autonomy in the context of increasing dependency is an interactive process involving the agendas and perceptions of various actors (the older person, family and friends, health and social care professionals) regarding issues such as the older person’s risk of harm and preferences for care and support, the resources available, and pre-existing relationships (Cott & Tierney, 2013). If there is to be a model of healthy ageing appropriate for advanced old age then the model must accommodate this significant relational aspect of late life.

Some suggest that dementia presents an insurmountable obstacle to the application of models of healthy ageing. Dementia brings the loss of personhood (cf. Gilleard, 1984; McKee, 2005), consigning the individual to the “black hole” (Gilleard & Higgs, 2010, p.125) of the Fourth Age that consumes all agency. Yet even in this extreme location of the aged self, if one takes a relational perspective one can theorise steps that can be taken to promote healthy ageing. Person-centred care (Edvardsson, Winblad, & Sandman, 2008) is premised on the idea that a knowledge of a person’s history, values, wishes and pleasures should be used to inform the care provided to that person in order to ensure that it is commensurate with his or her preferences. Where the care recipient has dementia, such information can be provided by a third party with intimate knowledge of the older person’s preferences. If we map such a

conceptualisation of care onto a model of healthy ageing, while the person with dementia's essential self may now be absent (or at the very least unreachable), the trace that remains is his or her projected self, which is realised in relational terms through the manifested thoughts and memories of friends, relatives, carers. Healthy ageing in this context can be achieved through the provision of those conditions of existence that are believed to be those that would most enhance that specific individual's physical and mental health.

### **Conclusions: This Special Issue of Psychology & Health**

In this editorial, we hoped to provide a substantial overview of the concept of and evidence-base for healthy ageing, with particular reference to issues and factors of relevance to health psychology. As part of this overview, we have presented an integrative model of healthy ageing, drawn attention to where health psychology research has informed this model, and indicated where there remain considerable controversies or gaps in our knowledge with which health psychology is especially well-placed to engage. All of the articles in this special issue, we believe, are particularly important in this last respect, examining and challenging ideas and evidence relating to healthy ageing by proposing exciting new theories and original hypotheses and by taking innovative approaches.

Three of the papers in this special issue add to the growing body of research addressing SPA, each taking a unique approach. Using a life history approach, Kenter and colleagues (Kenter et al., 2015) illustrate the complex interplay of factors that determine health-related behaviour, including the role of control beliefs, subjective perceptions of ageing, and beliefs about the necessity of physical activity for health. This paper is particularly enlightening, as the themes identified in the research provide evidence of the immense heterogeneity of life trajectories that comes with increasing age. Using data from the Australian Longitudinal Study of Ageing, Sargent-Cox and Anstey (2015) explore the mechanisms underlying the relationship between health control expectancies and age-

stereotypes on the process of ageing well. Their analyses indicate important relationships between age-stereotypes and health locus of control, with gender also playing a significant part in these relationships. This is an important finding, for while gender differences in healthy ageing are acknowledged, there is as yet little gender perspective in healthy ageing research. This study emphasises the necessity of developing just such a perspective. Beyer and colleagues (Beyer, Wolff, Warner, Schüz, & Wurm, 2015) show that physical activity is one of the key mechanisms that link SPA to health. In their longitudinal study, gain-oriented expectations of the ageing process were associated with more physical activity, which in turn predicted better health after 2.5 years. This is an excellent example of how long-term longitudinal data can be applied to test assumptions about a healthy ageing process that are often implicitly made, but only rarely explicitly tested.

Two of the papers in this special issue focus on the social influences on healthy ageing, but at different levels. At the micro-level Shankar and colleagues (Shankar, Rafnsson, & Steptoe, 2015) use data from the English Longitudinal Study of Ageing to highlight the importance of social interaction for healthy ageing. They demonstrate that older adults who experience isolation and loneliness also experience limitations in subjective well-being, both when examined as a cross-sectional snapshot and in terms of changes of subjective well-being over time. At the macro-level Marques and colleagues (Marques et al., 2015) use data from the European Social Survey to compare the social status of older adults in different European societies. They show that the status that older adults have in society interacts with SPA and health in that the effects of self-perceptions are more detrimental in countries that assign a lower social status to older adults. This macro-level analysis is very welcome in this special issue, given that much health psychology research, and indeed this editorial, is focused primarily at micro- and/or meso-levels.

Finally, two papers take a critical stance on the healthy ageing construct, although in very different ways. Stephens and Breheny (2015) suggests that policies promoting healthy ageing may be experienced as oppressive and ignore the realities of decline that accompany advanced ageing, arguing that a focus on capability (cf. Sen, 1993) in comparison to health would be beneficial. They offer qualitative data drawn from interviews with older people to support their argument. Scholz and colleagues (Scholz, König, Eicher, & Martin, 2015) review a number of different theories of later life that all contain notions of stabilisation of function as an integral aspect of the ageing experience. They argue that stabilisation of functional health is a more appropriate goal for older people than healthy ageing, and from this theoretical position offer suggestions for new methodological and analytical approaches for a health psychology of ageing.

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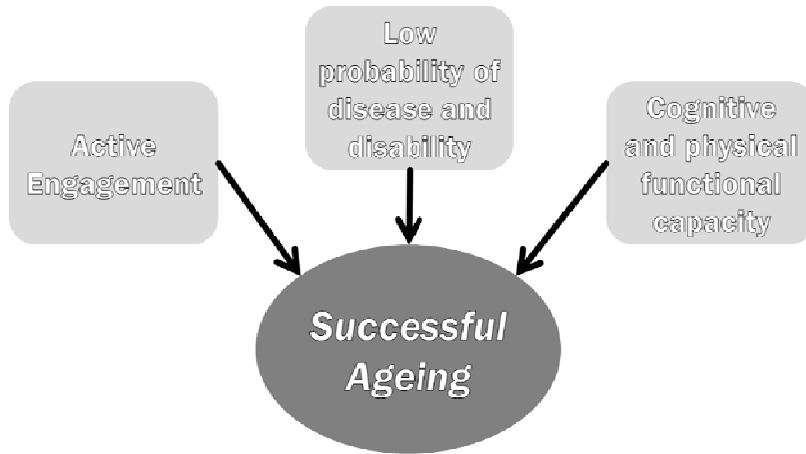
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Figure 1.

*A representation of Rowe and Kahn's (1987; 1997) model of successful ageing.*



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Figure 2.

*An integrative model of healthy ageing*

