

Healthy aging is reflected in well-being, participation, playfulness, and cognitive-emotional functioning

Amiya Waldman-Levi¹, Asnat Bar-Haim Erez^{1,2}, Noomi Katz^{1*}

¹ Research Institute for Health and Medical Professions, Ono Academic College, Kiryat Ono, Israel ² Occupational Therapy Department, Ono Academic College, Kiryat Ono, Israel

Abstract

An aging population generates an array of social and health concerns, among which is the psychological and cognitive well-being of the elderly. Recently, the focus in gerontology has expanded from the avoidance of age-related decline to the promotion of healthy aging. Factors such as cognitive and emotional status are considered to be potential contributors to well-being, and to participation in the community. This paper discusses the possible contribution of another factor - a person's playfulness - to healthy aging. Playfulness is a multidimensional concept that describes the mental propensity to engage in playful behavior, and includes properties such as fun-seeking motivation, uninhibitedness, and spontaneity. Research suggests that playfulness facilitates healing, improves morale, and increases motivation. Thus, it can be speculated that playfulness relates to other indicators of well-being, including psychological, cognitive, and physical aspects. Studies of the concept of playfulness mostly pertain to its measurement in young adults, with a paucity of research on older adult playfulness. In addition, the majority of research on Americans' health is "negative or disease-oriented," particularly in studies of older adults. There is compelling evidence that positive factors in individuals' lives, such as favorable emotions, happiness, life satisfaction, and quality of life relate intimately to healthy aging. Playfulness might be an important characteristic of cognitive functioning and emotional growth, which are both key components of healthy aging. This paper discusses the relationship and possible contribution of the concept of playfulness to the various indicators of healthy aging.

Citation: Waldman-Levi A, Bar-Haim Erez A, Katz N (2015) Healthy aging is reflected in well-being, participation, playfulness, and cognitive-emotional functioning. *Healthy Aging Research* 4:8. doi:10.12715/har.2015.4.8

Received: December 11, 2014; **Accepted:** January 21, 2015; **Published:** February 7, 2015

Copyright: © 2015 Waldman-Levi et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Competing interests: The authors have declared that no competing interests exist.

* Email: noomi.katz@ono.ac.il

Introduction

Shrinking fertility rates and longer lives are changing the demographic landscape of countries worldwide, challenging attitudes towards aging [1], costs associated with chronic illness and disability, and programs supporting long-term services for the elderly [2]. An aging population generates an array of social and health concerns, among which is the psychological and cognitive well-being of the elderly [3]. Recently, the focus in gerontology has expanded from the avoidance of age-related decline to the promotion of healthy aging. One key component of

optimal aging is maintaining, or even enhancing, emotional well-being over the life span [4]. Studies have shown an association between cognitive and emotional factors in aging. For example, Kryla-Lighthall and Mather [4] reported on differences in cognitive functioning among older people that might influence how they direct information processing towards emotional goals. Such cognitive and related emotional changes may lead to diminished well-being [5].

Another potential contributing factor to healthy aging is a person's playfulness [6]. Studies of the concept of playfulness pertain mostly to its measurement [7, 8]

and consequences in a work setting [9]. Auerhahn and Laub [10] suggest that playfulness facilitates healing, improves morale, and increases motivation. Tegano [11] showed a significant relationship between playfulness and creativity in adults, as was previously identified with children. Furthermore, it is assumed that by its power of de-dramatization, a playful attitude may help one to gain distance from a problem in a healthy way. Thus, it can be speculated that playfulness relates to other indicators of well-being, including quality of life or perhaps, psychological, cognitive, and physical well-being [12]. According to Phelan *et al.* [13], older adults' definition of successful aging - or more appropriately, healthy aging - is multidimensional and encompasses physical, functional or occupational, psychological (emotional), and social factors. However, no published work has described attributes of healthy aging that includes all four of these dimensions.

Objective

As most elderly populations are retired and have a longer a life span, the issues of well-being and participation in the community are of the utmost importance. We searched the literature regarding healthy elderly participation and well-being, considering the possible contribution of specific factors such as cognitive (executive functions) and emotional status, and playfulness to the health and well-being of the elderly, and to their participation in their community.

The studies included in this literature review were identified using multiple keyword searches in the following databases: PubMed, CINAHL, PsychINFO, Elsevier ScienceDirect, EBSCO and Web of Science. The keywords were generated following an initial review of participation, well-being, and healthy aging in relation to playfulness, and cognitive and emotional functioning.

Participation, well-being, and healthy aging

Participation in the home and community provides the means for physical, cognitive, and social activities, which are the natural foundation for health and well-

being during older age [14]. Well-being is defined as a complex physical, mental, and social state of overall contentment and life satisfaction [15]. A lifetime of occupation in personally and culturally productive and meaningful activities supports older adults' continued participation in their life roles [16]. Healthy aging can be explained as maintaining a high level of cognitive and physical function, together with a sustained engagement in life, accompanied by an overall state of health and well-being. Health, combined with psychosocial well-being, facilitates participation in meaningful occupations as well as an ongoing engagement in life [17].

Cognitive and physical functions, together with good health/wellness and participation in meaningful occupations, have been described as successful [16, 18] or as currently termed, 'healthy' aging. Healthy aging has been defined from physiological, psychological, societal, and personal perspectives as: "...the process of slowing down, physically and cognitively, while resiliently adapting and compensating in order to optimally function and participate in all areas of one's life (physical, cognitive, social, and spiritual)" [19]. The focus is on the process; it is the journey, rather than the end result. Medical and gerontological research on healthy aging has focused on the decline of abilities and the response to chronic illness often seen in the older population. Measurement of a decline in physical functioning is typically performed using Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) scales [20]. Cognitive functioning has been added to the medical definition of healthy aging due to research that highlights the neurophysiological and neuropsychological basis of cognition [21]. Psychological functioning related to healthy aging concerns the individual's attitudes, resilience, and personal definitions of aging [19, 22, 23].

Older adults' functional, emotional, cognitive, and health status should all be considered part of healthy aging since they all contribute to the likelihood of older adults living healthy and productive lives. In a phenomenological study, Gilbert *et al.* [24], explored factors related to healthy aging. Using a qualitative methodology, elderly adults were interviewed regarding their perceptions of facilitators and barriers to healthy aging. Among the facilitators found were:

(a) taking care of self; participants stated that self-care is a contributing factor to their longevity; (b) positive attitude; participants commented that having a positive attitude contributed to their longevity, mitigating the effects of aging; and (c) meaningful activity; all participants discussed the need to take part in some type of meaningful activity. The researchers also identified the following barriers affecting healthy aging: (a) giving in and giving up; participants pointed out their concern with the ability to “keep on going” even though they often felt it was too hard; (b) the aging process; participants discussed the importance of living with the deleterious effects of aging and compensatory medical treatment; and (c) environmental limitations; participants stated the importance of the environment in remaining active and healthy [24].

In another study that examined the views of healthy aging among the elderly in Thailand [23], participants described being healthy as the result of multiple components, involving physical, mental, and social well-being. Healthy aging was viewed as the absence of serious diseases, having functional independence, a positive psycho-emotional outlook, and making a social contribution. Furthermore, participants identified positive emotion as important to the promotion of mental well-being, and felt that healthy elderly people should be characterized as friendly, humorous, and enjoyable. Furthermore, the findings of this study indicated that the more elderly people indulge in promoting good health and preventing disease, the greater the level of healthy aging they achieve. Among the factors identified by participants as promoting psychological health were: positive attitude/thinking, expressing feelings, and having fun. Among the factors that were identified by participants as promoting physical health were: physical activity, nutritional practice, absence of damaging behaviors, and management of illness [23].

A cross-sectional study of older Korean adults examined their perception of successful aging [22] and found that the factor with the most influence on successful aging was self-esteem; this was followed by self-achievement, interpersonal relationships, and self-efficacy. According to the participants, the successful aging of older Korean adults can be achieved by receiving the correct and necessary support during older age, relying on confidence in

one’s own abilities as an older adult, acquiring a sense of self-worth, expanding one’s achievements, and attaining self-satisfaction with one’s life [22].

Adults’ playfulness

Playfulness, a multidimensional concept, is the internal disposition or mental propensity to engage in playful behavior [8]. It includes fun-seeking motivation (further divided into: fun belief, initiative, and reactivity), uninhibitedness, and spontaneity. In one of the most cited definitions, Barnett [25] added that while play refers to behavioral manifestations, playfulness is defined as “the predisposition to frame (or reframe) a situation in such a way as to provide oneself (and possibly others) with amusement, humor, and/or entertainment” [25]. Thus, playfulness is a way of thinking, and play is the external manifestation of this attitude [9].

In an attempt to determine whether playfulness could be more precisely identified as a meaningful psychological construct in young adults, Barnett [25] pointed out that individuals with such a heightened predisposition are typically funny, humorous, spontaneous, unpredictable, impulsive, active, energetic, adventurous, sociable, outgoing, cheerful, and happy, and are likely to manifest playful behavior by joking, teasing, clowning, and acting silly. An interesting finding was that the underlying structure of the 15 playfulness qualities was equivalent for both men and women. Proyer [26] claimed that a measure of an adult’s playfulness might neglect some important aspects, such as an intellectual component (e.g. verbal fluency). In addition, social competencies are not reflected in the current measures (e.g. a charming way of dealing with other people, being fun to be around, or being witty). In a study of 240 adults aged between 17 and 85 years, Proyer [26] suggested that adults’ playfulness appeared to be multidimensional, and that playful people can be described as warm and tender toward others. According to Proyer [12], the prototypic playful adult can be described as being extroverted, low in conscientiousness, open, agreeable, following intrinsic life goals with extrinsic goals being of low importance, endorsing of a pleasurable and engaged life, and having both a high self-perception of his or her own ability to be genuine.

Gordon [27] builds upon research in attachment theory that correlates secure attachment in infancy with an adult's well-being, to demonstrate how playfulness might be a life-long outcome of secure attachment, and a primary factor in well-being among adults aged 28 to 63 years old. According to the interpretation of this study's findings, playfulness is a state of mind; an internal predisposition. Playfulness allows adults to approach activities with the same openness of mind with which the child approaches play; the beginning is known and a precise end is anticipated, but the nature of its unfolding may vary. With playfulness, difficult situations are perceived as challenges, occasions to learn, and possibilities to increase one's competence and skills. Furthermore, mistakes are no longer considered a failure, rather a possibility to learn and to grow [7].

Further support of the possible adaptive function that playfulness may serve in adulthood is found in Magnuson and Barnett's [25] cross-sectional study. They investigated the interrelationship between playfulness in 898 young adult students, as well as perceived stress, and styles of coping. Their findings revealed that playful individuals reported lower levels of perceived stress than their less playful counterparts, and that these individuals more frequently utilized adaptive, stressor-focused coping strategies; they were also less likely to employ negative, avoidant, and escape-oriented strategies. The results suggested that playfulness served as a strong adaptive function with university students, providing them with specific cognitive resources from which they could incorporate effective coping behaviors in the face of stressful situations [28].

The paucity of research on older adult playfulness is unfortunate; the majority of research on Americans' health is "negative or disease oriented," particularly in studies of older adults. There is compelling evidence that positive factors in individual's lives, such as favorable emotions, happiness, life satisfaction, and quality of life, relate intimately to healthy aging. Playfulness might be an important characteristic of cognitive functioning and emotional growth, both of which are important components of healthy aging [6]. In the Proyer *et al.* [29] study in a sample of elderly people, a positive relationship is reported between playfulness and various indicators of quality of life that supports these notions.

Emotional and cognitive status among older adults

The intersection of neurological function and affective goals in aging indicates that cognitive functions, particularly executive function, are critical factors in promoting emotional well-being late in life [30, 31]. Although negative life events tend to become more frequent with age, as cognitive function and health tend to decline [21], emotional well-being does not appear to be compromised by the aging process. Given the power of cognition in determining emotional outcomes, goal-directed cognition has been proposed as a tool for modifying affective experiences. Well-being among the elderly is also influenced by contextual demands on cognition [32]. Thus, it is likely that emotional well-being and cognitive function affect each other in a feedback loop, wherein enhanced well-being leads to greater cognitive engagement and better health, and in turn promotes greater life satisfaction [33].

Elderly well-being and life satisfaction, as well as cognitive and emotional status, can be greatly affected by contextual variables such as a social network, living arrangements, and what these have to offer in terms of leisure activities [14, 34]. For instance, a study by Golden *et al.* [34] found that, independently, loneliness and social networks affected mood and well-being among the elderly. Oladeji [35] examined family care, social services, and living arrangements, and their potential associations with the psychosocial well-being of the elderly from selected households in Ibadan, Nigeria. This study indicated that significant relationships existed between these factors among the elderly [35]. In a longitudinal cohort study by Gow *et al.* [14], the effect of leisure and physical activities on level of cognitive ability were examined using a community-dwelling sample of adults recruited to the Glostrup Cohort from Denmark. Findings indicated that greater participation in a selected activity, either leisure or physical, was consistently associated with a higher level of cognitive ability. These findings clearly exemplify the contemporaneous association between activity participation and cognitive-emotional status.

Discussion

The aging population generates an array of social and health concerns [3]. Recently, the focus in gerontology has expanded from trying to avoid age-related decline, to promoting optimal aging. There is compelling evidence that positive factors in individuals' lives, such as favorable emotions, happiness, life satisfaction, and quality of life, relate to healthy aging, as well as a person's playfulness [6]. However, to the best of our knowledge, there are no published data regarding the possible relationships between well-being, participation, and playfulness with cognitive-emotional functioning among the elderly.

In the current literature review, we found the terms 'healthy aging' as well as 'successful aging' used interchangeably. Healthy aging has been defined as the process of slowing down, physically and cognitively, while resiliently adapting and compensating, in order to optimally function and participate in all areas of one's life [19]. Thanakwang *et al.* [23] added the absence of serious diseases to the definition of healthy aging, as well as having functional independence, a positive psycho-emotional outlook, and making a social contribution. The concept of 'successful aging' has also been defined in relation to one's subjective sense of value, as well as the absence of severe chronic disease and disability, maintenance of good physical and cognitive abilities, and preservation of social and productive activities, such as leisure participation [18, 36]. Cha *et al.* [22] focused on attributes such as self-esteem, self-achievement, interpersonal relationships, and self-efficacy, while Carlson *et al.* [37] highlighted a sense of control over one's life, and achieving continuity with one's past, as part of the definition.

In order to further investigate an older adult's well-being, and participation in life, it is essential to acknowledge that both concepts share commonalities, though they do not measure or indicate quality of life. Rather, the antecedents and attributes defining the concept provide the foundation for how each older adult interprets the aging process, thereby determining his or her overall quality of life [38]. Based on the literature review conducted on these concepts, we suggest implementing a broader perspective in

relation to the healthy aging of older adults by including well-being and participation.

Healthy aging among older adults is also affected by their cognitive and emotional functioning [5, 32, 33]. Moreover, it is assumed that emotional well-being and cognitive functioning affect each other in a feedback loop, wherein enhanced well-being leads to greater cognitive engagement and, in turn, better health [5, 33]. However, it appears that well-being and life satisfaction, as well as cognitive and emotional functioning, can be greatly affected by contextual variables such as one's social network, living arrangements, and what these have to offer in terms of leisure activities [14, 34].

Thus, understanding the impact that psychological and sociological factors have on healthy aging is essential for advancing older adults' capacity to cope with deteriorating factors and perceive them as a potential positive gain [39]. As reflected in various studies, which employed different research methodologies in attempt to understand what healthy or successful aging is, healthy aging also encompasses cognitive and emotional functioning in later life [18, 19, 24].

Lastly, the current review would be incomplete without a further discussion of the relationship and contribution of the concept of 'playfulness' to an older adult's healthy aging process. Playfulness is a personal disposition [8, 25] that taps into cognitive and emotional factors, and it is manifested in many important behaviors in one's adaptability and resilience in life, especially in later life [6, 7, 28]. As Proyer *et al.* [40] reported of the positive relation between playfulness and various indicators of quality of life in a sample of elderly people, this concept should be included in studies aiming to explore healthy aging, well-being, and participation of the elderly.

Future research

The aging process and its associated societal implications both on the micro and macro levels necessitates addressing the above issues in order to promote society's recent concerns regarding the growing aging population. Research in the field of older adult healthy aging should address previously overlooked factors such as well-being, participation,

and playfulness, and their effect on the elderly aging process. With this aim in mind we are launching a large study on ‘Playfulness, well-being, and participation among healthy elderly adults, and those with minor to moderate disabilities,’ using a range of measures in an attempt to study the factors attributed to healthy aging beyond cognitive, emotional, and physical factors.

References

1. Humphreys G. The health-care challenges posed by population ageing. *Bull World Health Organ.* 2012;90:82-3.
2. Hudson RB. The aging network and long-term services and supports: synergy or subordination. *Generations.* 2014;38:22-9.
3. Lim LL, Kua EH. Living alone, loneliness, and psychological well-being of older persons in Singapore. *Curr Gerontol Geriatr Res.* 2011; 2011:673181.
4. Kryla-Lighthall N, Mather M. The role of cognitive control in older adults’ emotional wellbeing. In: Bergntson V, Gans D, Putney N, Silverstein M, editors. *Handbook of Theories of Aging.* 2nd Edition. New York: Springer Publishing; 2009:323-44.
5. Wilson RS, Boyle PA, Segawa E, Yu L, Begeny CT, Anagnos, SE, et al. The influence of cognitive decline on wellbeing in old age. *Psychol Aging.* 2013;28: 304-13.
6. Yarnal C, Qian X. Older-adult playfulness: an innovative construct and measurement for healthy aging research. *Am J Play.* 2011;4:52-79.
7. Proyer RT. Development and initial assessment of a short measure for adult playfulness: The SMAP. *Pers Individ Dif.* 2012;53:989-94.
8. Shen XS, Chick G, Zinn H. Validating the adult playfulness trait scale (APTS): an examination of personality, nomological Network of Playfulness. *Am J Play.* 2014;6:345-69.
9. Guitard P, Ferland F, Dutil E. Toward a better understanding of playfulness in adults. *OTJR.* 2005;25:9-22.
10. Auerhahn NC, Laub, D. Play and playfulness in Holocaust survivors. *Psychoanal Study Child.* 1987;42:45-58.
11. Tegano DW. Relationship of tolerance of ambiguity and playfulness to creativity. *Psychol Rep.* 1990;66:1047-56.
12. Proyer RT. Examining playfulness in adults: Testing its correlates with personality, positive psychological functioning, goal aspirations, and multi-methodically assessed ingenuity. *Psychol Test Assess Model.* 2012;54:103-27.
13. Phelan EA, Anderson LA, LaCroix AZ, Larson EB. Older adults’ views of “successful aging”: how do they compare with researchers’ definitions? *J Am Geriatr Soc.* 2004;52:211-6.
14. Gow AJ, Mortensen EL, Avlund K. Activity participation and cognitive aging from age 50 to 80 in the Glostrup 1914 Cohort. *J Am Geriatr Soc.* 2012;60:1831-8.
15. Christiansen C, Baum CM, Bass-Haugan J, editors. *Occupational therapy: performance, participation and well-being.* 3rd edition. Thorafare: SLACK; 2005.
16. Stevens-Ratchford RG. Occupational engagement motivation for older adult participation. *Top Geriatr Rehabil.* 2005;21:171-81.
17. Wilcok AA. Relationship of occupations to health and well being. In: Christiansen CH, Baum CM, Bass-Haugan J, editors. *Occupational therapy: performance participation and well-being.* 3rd edition. Thorafare: SLACK; 2005.
18. Minhat HS, Amin RM. Sociodemographic determinants of leisure participation among elderly in Malaysia. *J Community Health.* 2012;37:840-7.
19. Hansen-Kyle L. A concept analysis of healthy aging. *Nurs Forum.* 2005;40:45-57.
20. Lawton MP. Behavioral and social components of functional capacity. In: National Institutes of Health consensus development conference on geriatric assessment methods for clinical decision making. Washington DC: National Institutes of Health; 1987, pp 23-29.
21. Levy LL. Cognitive aging. In: Katz N, editor. *Cognition, occupation and participation across the life span.* 3rd edition. Bethesda, MD: AOTA Press; 2011.
22. Cha MH, Seo EJ, Sok SR. Factors influencing the successful aging of older Korean adults. *Contemp Nurse.* 2012;41:78-87.
23. Thanakwang K, Soonthorndhada K, Mongkolprasoet J. Perspectives on healthy aging among Thai elderly: a qualitative study. *Nurs Health Sci.* 2012;14:472-9.
24. Gilbert C, Hagerty D, Taggart HM. Exploring factors related to healthy ageing. *Self-care. Depend Care Nurs.* 2012;19:20-25.
25. Barnett LA. The nature of playfulness in young adults. *Pers Individ Dif.* 2007;43:949-58.
26. Proyer RT. A psycho-linguistic study on adult playfulness: its hierarchical structure and theoretical considerations. *J Adult Dev.* 2012;19:141-9.
27. Gordon G. Well played: the origins and future of playfulness. *Am J Play.* 2014;6:234-66.
28. Magnuson CD, Barnett LA. The playful advantage: how playfulness enhances coping with stress. *Leis Sci.* 2013;35:129-44.
29. Proyer RT, Ruch W, Müller L. Sense of humor among the elderly: findings using the German version of the SHS. *Z Gerontol Geriatr.* 2010;43:19-24.

30. Hartman-Maeir A, Katz N, Baum CM. Cognitive functional evaluation (CFE) process for individuals with suspected cognitive disabilities, *Occup Ther Health Care*. 2009;23:1-23.
31. Katz N, Maeir A. Higher-Level Cognitive Functions enabling participation: awareness and executive functions. In: Katz N, editor. *Cognition, occupation and participation across the life span*. 3rd edition. Bethesda, MD: AOTA Press; 2011, pp 13-40.
32. Ochsner KN, Gross JJ. The cognitive control of emotion. *Trends Cogn Sci*. 2005;9:242-9.
33. Kryla-Lighthall N, Mather, M. The role of cognitive control in older adults' emotional wellbeing. In: Bergtson V, Gans D, Putney N, Silverstein M, editors. *Handbook of theories of aging*. 2nd edition. New York: Springer Publishing; 2009, pp 323-44.
34. Golden J, Conroy RM, Bruce I, Denihan A, Greene E, Kirby M, et al. Loneliness, social support networks, mood and wellbeing in community-dwelling elderly. *Int J Geriatr Psychiatry*. 2009;24:694-700.
35. Oladeji D. Family care, social services, and living arrangements: factors influencing psychosocial wellbeing of elderly from selected households in Ibadan, Nigeria. *Educ Res Int*. 2011;2011.
36. Matsubayashi K, Ishine M, Wada T, Okumiya K. Older adults' views of "successful aging": comparison of older Japanese and Americans. *J Am Geriatr Soc*. 2006;54:184-7.
37. Carlson M, Clark F, Young B. Practical contributions of occupational science to the art of successful ageing: how to sculpt a meaningful life in older adulthood, *J Occup Sci*. 1998;5:107-18.
38. Cline DD. A concept analysis of individualized aging. *Nurs Educ Perspect*. 2014;35:185-92.
39. Singh AN. Scientific path of healthy aging. *Int Med J*. 2014;21:130-1.
40. Proyer RT. Being playful and smart? The relations of adult playfulness with psychometric and self-estimated intelligence and academic performance. *Learn Individ Differ*. 2011;21:463-7.