REVIEW ARTICLE

Health Literacy As A Tool To Ease Pressure On Long-Term Care Systems: Perspectives And Issues On Healthy Aging Across The Life Course

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ABSTRACT

This paper aims to heighten attention and awareness surrounding the need for collective actions to advance health literacy interventions and initiatives within a life-course framework. Placing health literacy within a life course approach is held to be a precursor to healthy aging and an effective means of a) increasing healthy life expectancy in later life and b) reducing escalating costs associated with the operation of long-term care systems established to provide long-term care for the aged. Governments worldwide and their respective public health systems are encouraged to initiate policy developments that promote health literacy as a national health imperative. The significant actual and potential contributions of a strengthened focus on health literacy are highlighted as offering a pathway for a cultural shift leading to patient and consumer empowerment, increased health care equity, and improvements in organizational and health system outcomes. Making health literacy an essential part of health care policies warrants an understanding of the complex and dynamic interplay of components operating at the individual, community, and health system levels.

Keywords: Communication technology, digital literacy, health competency, longevity effect, self-management

Key Practitioners Message

1. This manuscript offers useful insights and approaches to health professionals working in middle-income and transitional phase governments where major shortfalls exist in legislative commitments for supporting the health and well-being of older adults.
2. Health professionals need to be more cognizant of their responsibilities in providing health information to health consumers including the adoption of practical and innovative strategies that help to create health literate environments to improve individual and community-based health outcomes.
3. This article represents a call to action by health care professionals to identify deficits in their respective health systems with a view to enhancing access to health information and allied services including easy-to-follow navigation steps for assistance.
4. Researchers and health care professionals should be encouraged to support the practice of healthcare, disease prevention, and health promotion within a framework that examines how the unequal distribution of health literacy is influenced by socio-economic determinants at different times in the life-course.

"Knowing is not enough; we must apply. Willing is not enough; we must do."

Goethe

Introduction

Harper (2019) refers to the myriad of complex issues and challenges that are emerging worldwide as nations are progressively becoming aging societies. Berlinger and Solomon (2018) refer to aging societies as those in

which "fewer children are born, adults are living longer, and the population distribution is shifting toward older adults. A society in which more residents are over sixty-five than under fifteen is often described as an aging society" (p. S3). According to the National Research Council (2001) which is the working branch of the United States National Academies "The projected growth in the numbers and proportions of the world's older population poses an array of challenges to policymakers" (p. 1). The World Health Organization (2015) estimates that the number of people over 60 years of age is set to double by 2050 and will require radical societal change. Among the host of formidable and unprecedented challenges arising from the population, aging is the increasing demand on long-term care systems for older people made vulnerable by the passage of time. In the present situation, long term care can be taken to mean the provision of programs, activities, and support by a range of persons assigned to assist people with, or who may be at risk of, major ongoing loss of functional capacity and abilities with potential or actual adverse effects that endanger their fundamental human rights, freedoms, and dignity. On the other hand, long-term care systems have been established in countries worldwide to meet the needs of older people requiring long-term care. Pot, Briggs, and Beard (2017) drawing upon the World Health Organization (2016) *Global Strategy and Action Plan on Ageing and Health* report that long-term care systems are primarily concerned with the "delivery and coordination of all care, support, and assistance to ensure the best possible trajectories of an individual's capacity and functional ability over time for people with, or at risk of, a significant ongoing loss of capacity" (p. 7). Long-term care systems vary in design and operation across countries and involve a myriad of settings that include home, community, and residential aged care facilities. The costs associated with the operation of long-term care systems are projected to escalate and will vary in accordance with a) care setting b) country and geographic location of care and c) level of required care.

It is not surprising, therefore, that governments worldwide are concerned and motivated to avoid the anticipated increase in health care costs arising from population aging. Intille (2004) in recognition of the increasing pressure on healthcare systems resulting from the upward movement of age demographics advocates for the adoption of persuasive type technologies to promote health and wellness throughout all stages of life. It is easy, therefore, to understand how problem-stated orientations surrounding shifts to predominantly older populations have and continue to echo through the corridors of governments causing alarm and consequent demand for strategies to curb expected increases in health care costs for older people. For example, Haan, Rice, Satariano, and Selby (1991) in a special issue of Journal *of Aging and Health* presented an article entitled "Living Longer and Doing Worse" and Gruenberg's (1977) telling statement "the failures of success in the health care journal the *Milbank Memorial*

Fund Quarterly Health and Society refers directly to "how medicine has succeeded in dealing with many health problems, though the result is greater morbidity" (Brooks, 1996, p. 277). More recently, however, Williams, Cylus, Roubal, Ong, and Barber (2019) in a policy brief on building a framework for sustainable health financing for an aging population proffer the view "Healthy and active aging can help reduce the burden of disease and disability in older people and delay care dependency, contributing to reduced demand for health care" (p. 13).

The primary objective of this paper is to foster awareness and stimulate debate in the hope of creating new ways of thinking and acting in terms of policy development in relation to improving population health through health literacy for aging societies. In simple terms, the notion of health literacy concerns the extent to which individuals have the confidence and basic capacity to obtain, process, and understand health-related information and services to make appropriate and safe decisions concerning the management of their health and well-being. A report by the Centers for Disease Control and Prevention (2009) makes the point that in relation to health literacy that age-related deficits in the sensory processes involving vision and hearing acuity and cognitive integrity are good predictors of health literacy. From the outset, however, the acquisition of basic literacy and numeracy skills forms the cornerstone for advancing the ability to process information whatever it might be. The argument developed in this paper is that health information provided in the right context and the right form and with access to meaningful support assistance when and where required provides individuals with opportunities for reflexive choice-making leading to positive health changes that endorse the view offered by Laceulle (2014) "that almost all aspects of people's lives are susceptible to revision in light of new information or knowledge" (p. 97). It must be recognized that irrespective of whether countries are designated as developed or underdeveloped that current and future people of all ages, including older citizens, will be very different people with different capacities and capabilities, different outlooks, expectations, and attitudes from their predecessors. The stance taken in the present situation is that health literacy should be fostered by national governments and their respective public health systems as a preventive health strategy and the cornerstone of all national and regional health agendas for a) empowering all people across all ages to pursue healthy lifestyles across the life course b) facilitating an increased awareness surrounding the modifiability of the aging process that leads to an enhanced understanding and appreciation that *it is never too late to benefit from healthy lifestyle interventions* and c) helping to curb the overall costs associated with the operation of health care systems for older people.

Promoting Healthy Aging: A Life Course Challenge

The impact of increases in life expectancy signals what might be termed the *"longevity effect"* whereby there is the ever-expanding growth in the number of people living beyond 80 years of age with implications for increasing demands for social and health care support arising from the onset of dependency and frailty (Christensen, Doblhammer, Rau, & Vaupel, 2009; Parker & Thorslund, 2007). Lunenfeld and Stratton (2013) looking at the clinical consequences of an aging world argue for the promotion of healthy aging to combat increasing morbidity and disability among the aged and emphasize the need for health-related social policies and preventive strategies. Cristea, Noja, Stefea, and Sala (2020) suggest that a first step to reducing health care costs concerning population aging should be to set about improving the health status of older people by encouraging them "to adopt healthy aging mindsets through preventive approaches, with the help of medical professionals and awareness campaigns, especially for the older adults and the segment of the population aged 55-64" (p. 17). Offering a similar supportive orientation Lak, Rashidghalam, Myint, and Baradaran (2020) in a systematic review of literature on active aging argue "Creating positive aspects of aging life is an important factor in achieving health expectancy. In societies with a growing older adult population, great attention should be paid to the participation of the older adults in their well-being and that of their families" (p. 1). However, a cautionary note is in order, in so far, that to only examine the role of individual agency in adopting healthy living is to ignore the dynamic interplay of social and institutional forces in shaping individual health practices across the life course. Dannefer and Lin (2014) about the issue of "social disadvantage" assert, "People with lower levels of education, income, and wealth are more likely to experience earlier onset of chronic diseases and subsequently, more rapid progression of the loss of functioning" (p. 185).

Maddox (1992) about the revolution of knowledge relating to human aging identifies the following salient aspects that impact the health and well-being of older people involving "(a) the heterogeneity of aging populations (b) continuities in the aging process (c) the modifiability of the aging process and (d) the importance of the interactions between people and their environments" (p. 60). Taking each of the preceding issues in turn it is clear that diversity among the aged is exemplified by the following viewpoint offered by Maddox "The more carefully we look, however, the more we become aware that at the same chronological age the variance around the central tendency is quite pronounced...So although in the long run, we are all dead, we do not get there in identical ways biologically or socially" (p. 61). The notion of continuity reflects the predictive power of the Shakespearean phrase "What's past is prologue" which in the present situation can be interpreted as reflecting the significance of how early and mid-life health behaviors can provide insights relating to the shape and form of health and well-being in later life. Carstensen,

Roseberg, McKee, and Aberg (2019) offer support for the Shakespearean perspective "Well-being in later life cannot be fully understood without contextualizing an individual's present circumstances through the prism of their past" (p. 42). Research findings support the modifiability of the aging process by showing a positive effect on the health behaviors of older adults through the application of behavior change interventions (Burbank, Padula, & Nigg, 2000; Michel, Dreux, & Vacheron, 2016). Walker (2018) utilizing biological and social science research insights contends "that, while aging is inevitable, it is also plastic. This means that it not only manifests itself in different ways but also that it can be modified by mitigating the various risk factors that drive it" (p. 253). Research work undertaken by Calder et al. (2018) on healthy aging indicates that lifestyle changes made earlier in the life course that include nutrition and diet interventions offer positive potentials for living longer healthier lives. On the other hand, Kalache et al. (2019) reveal that for some older people their lifespan potential is limited due to unequal access to healthy diets, health services, and health-related information. A study by Stafford, Von Wagner, Perman, Taylor, and Kuh, D (2018) identified that older people who reported poor social connectedness had a lower engagement with health preventive services than similarly aged persons who maintained good levels of social connectedness. The same researchers found that meaningful social connectedness resulted in the creation of a network of social contacts that assisted in the maintenance of positive levels of mental health. Excellent coverage of research on effective strategies to promote healthy aging is provided in a report to the Victorian Department of Health and Human Services by the National Ageing Research Institute and the Council on Ageing Victoria (2016) "Healthy Ageing Literature Review". The preceding report suggests "that an evidence-based approach should be used to underpin the aims, objectives, and goals of any healthy aging program and to guide its development and implementation" (p. 9).

Gregg (1992) drawing upon the work of Rowe and Kahn (1987) made mention of the "healthspan" concept which formed part of their notion of "successful aging" and refers to the maintenance of "full physical and psychological functions as nearly as possible to the end of life" (p. 169). It would seem appropriate to examine the potential for initiating health interventions that are supportive of the "healthspan" concept that is embedded in a life-course framework to influence and encourage people across all ages and socio-economic groupings to adopt and maintain lifelong health-related actions that lead to well-being in older age (Kuh, Cooper, Hardy, Richards, & Ben-Shlomo, 2014; Kuh, Karunananthan, Bergman, & Cooper, 2014; Walker, 2018). A complementary concept "healthy life expectancy" offers the potential for inclusion in the thinking and decisions surrounding interventions that support healthy aging. In simplistic terms, healthy life expectancy about older age, can, for example, be illustrated by the number (proportion) of healthy life

years at 65 years and beyond that are lived relatively free from disability and frailty (Robine & Jagger, 2005). Of particular importance to older age, the concepts relating to health-span and healthy life expectancy offer realistic potentials and possibilities for improvement in well-being through actions taken preferably in an earlier life but also in later life (Beltrán-Sánchez, Soneji, & Crimmins, 2015; Crimmins, 2015; Michel et al., 2016).

Health Literacy: Functional Interpretation and Implications

Berkman, Davis, and McCormack (2010) in light of work by Zarcadoolas, Pleasant, and Greer (2006) and Nutbeam (2008) emphasize "Definitions of health literacy have begun to embrace a more ecologically framed conceptual model with an appreciation for the role of language, culture, and social capital" (p. 16) According to Parker, Ratzan and Lurie (2003) "Health literacy has many dimensions, including what it means to be able to read, understand, and communicate important medical and health information during different phases of life. Health literacy is central to multiple health system priorities, including quality, cost containment, safety, and patients' involvement in health care decisions" (p. 147). The U.S. Department of Health and Human Services (2010) in a national action plan to improve health literacy adopted the following two primary principles "(1) everyone has the right to health information that helps them make informed decisions and (2) health services should be delivered in ways that are understandable and beneficial to health, longevity, and quality of life" (p. 1). Berkman and his colleagues (2010) provide a typical definition of health literacy that places a focus primarily on the responsibility of the individual consumer to take appropriate action for their health with health literacy taken to mean "The degree to which individuals can obtain, process, understand, and communicate about health-related information needed to make informed health decisions" (p. 16). However, Sørensen and her colleagues (2012) argue that discussions on health literacy need to embrace a more realistic approach by seeing "Health literacy as an interaction between the demands of health systems and the skills of individuals" (p. 3). Hill (2014) articulated the following definition of health literacy in which responsibility for action is shared between the individual consumer and key stakeholders across health care domains: "The degree to which individuals can obtain, process and understand the health information and services they need to make appropriate health decisions. Healthcare providers and the health system can provide information and improve interaction with individuals, communities and each other to respond to and improve health literacy" (p. 10). At the same time, there exists the need to accept the fact that health literacy understandings and meanings will vary in terms of acceptance, interpretation, and significance following whether or not the focus is upon:

- Individual consumers, caregivers, communities;
- Health professionals and the health care workforce;
- Health care organizations and allied health systems.

Figure-1 illustrates what can be seen as a dynamic interaction network constituted by healthcare professionals, the health system, and users' who collectively form the core of an operational framework for creating health literate communities.

Figure 1

Illustration of the Health Literacy Network Operating in a Complex Interactive Process Between Individual Consumers, Communities, Health Professionals, and Healthcare-Related Systems

Note. Source: Department of Health Victoria (Australia), 2013, p. 9). {Used by permission}.

Loan et al. (2018) make the following call for action to enhance health literacy "In health-care systems and community health care settings, leaders must provide resources that enable all health-care providers to minimize the gap between patient skills and abilities and the demands and complexities of health care systems" (p. 97). It must be understood that although heterogeneity is the defining feature of aging populations there will always be some older people who will need assistance to navigate their way through the health care system. A recent survey in Turkey of older adults' level of health literacy by Bozkurt and Demirci (2019) found that for the majority of their study sample that health literacy was deemed to be "problematic and inadequate" (p. 272). The preceding situation in Turkey would more than likely be similar in all countries throughout the world.

Clouston, Manganello, and Richards (2017) contend that "Health self-management is integral to healthy aging and lowered disease burden" (p. 494). Spoel, Harris, and Henwood (2014) in an examination of work undertaken by Rudman (2006) and Katz (2002) report "how the civic imperatives of self-care are constituted in especially pronounced ways for older citizens who are urged to stave off the effects (and healthcare costs) of aging and emerging health problems through self-care practices of body monitoring and improvement, risk management, and active lifestyles" (p. 132). It is one matter for social systems to establish normative

expectations for personal responsibility for healthy living, there is, however, the need to consider the adequacy or otherwise of available government and health system support to adopt and maintain healthy lifestyle practices. For Spoel and her colleagues (2014), the dominant rhetoric focusing on the individual to be a good health citizen "does not preclude a simultaneous, minor chord of critique directed at the issue of how government should or could better enable healthy living" (p. 145). Work by Nielsen-Bohlman, Panzer, and Kindig (2004) in their major text for the Institute of Medicine "*Health literacy: A Prescription to End Confusion*" state: "More needs to be known about the causal pathways between education and health, the role of literacy, and the discrete contribution of health literacy to health. With this knowledge, we will be able to understand which interventions and approaches are most appropriate and effective" (p. 13). With the majority of nation-states growing more complex along with the growth of "aging societies" the need for improved levels of health literacy becomes increasingly important, particularly in light of the proliferation and dissemination of health misinformation and questionable lifestyle practices. People with strong health literacy skills are likely to adopt healthy lifestyles resulting in better health and well-being. At the same time, people with well-developed health literacy skills and competencies are in a more advantaged position to identify and target modifiable risk factors. However, individuals with weaker health literacy skills are more likely to engage in risky health behaviors leading to poorer levels of health and well-being. While the relationship between low literacy and numeracy skills and poor health literacy is strong there is also a need to recognize that an individual with high literacy skills may still register poorly on overall health literacy.

The issues surrounding health literacy and dementia raise several challenges for caregivers and researchers. Rostamzadeh et al. (2020) present a case for more research into the systematic assessment of health literacy in the "at-risk" population for Alzheimer's disease. The preceding researchers argue that better understandings of health literacy concerning cognitive decline can assist in the provision of "adequate communication with persons at-risk, being sensitive to individual needs and preferences" (p. 47). Oliveira, Bosco, and di Lorito (2019) present research findings that suggest that low levels of health literacy may indeed predict future higher dementia risk. Lo (2020) argues for action to empower informal family caregivers with improved dementia literacy for them to implement "effective care strategies, thus ameliorating the caregiver burden and enhancing the life quality of people with dementia in the long run" (p. 1). Sadak, Wright, and Borson (2018) report promising results on their work to develop, operationalize, and culturally adapt a new caregiver management measure for dementia family caregivers. A systematic review of health literacy and older adults by Chesser, Woods, Smothers, and Rogers (2016) highlights the need to improve health strategies for older people known to have low health literacy including the adoption of a "standardized and validated clinical health screening tool for older adults" (p. 1).

The challenge surrounding the effectiveness or otherwise of health literacy interventions will necessarily require the incorporation of a "Quality Assurance System" that is assigned the task of engaging a continuous process of monitoring the planning, delivering, modifying, and reviewing of policy and interventions within and across all of the constituent networks.

Larsen, Thygesen, Mortensen, Punnett, and Jorgensen (2019) raise an interesting slant on workplace health literacy interventions that are focused on employees who are prone to a great deal of health and well-being challenges. For example, the preceding researchers suggest that "Organizing health literacy in nursing homes might be a feasible and effective way to build work environment efforts targeting the needs of employees" (p. 386). Sørensen and her colleagues (2012) offer a human rights perspective on health literacy and its importance in public health and healthcare:

> Advancing health literacy will progressively allow for greater autonomy and personal empowerment, and the process of health literacy can be seen as a part of an individual's development towards improved quality of life. In the population, it may also lead to more equity and sustainability of changes in public health. Consequently, low health literacy can be addressed by educating persons to become more resourceful (i.e., increasing their health literacy), and by making the task or situation less demanding, (i.e., improving the "readability of the system"). (p.10)

Digital Health Literacy

In a world of exponential growth in digital technologies, there are of course specific skills required to access and use the Internet to obtain and use health information. There will be some older people who may have problems with medical jargon and/or lack the confidence, skills, experience, and/or financial resources to use available digital technologies. In one way or another, it has to be accepted that technological innovation has impacted nations worldwide, and as such, older people irrespective of their country and geographical location will have already experienced varying levels of exposure to digital technology. There will of course be much diversity within and between older age population cohorts within each nation-state as to the acceptance, use, and skill development associated with the application of digital technology as part of their evolving lifestyle practices. Moss, Süle, and Kohl (2019) make a case for the promotion of digital health literacy arising from the emerging trend where "Both electronic health (eHealth) and mobile health (mHealth) are

becoming prominent components of health care" (p. 57). The term eHealth refers to health information and services provided by information and communication technology (ICT) such as computers, mobile phones, whereas mHealth provides health information via smart or portable (wrist) type devices. It must be understood that globally, information communication technology (ICT) will become an accepted and significant mode for communicating health information (Berkman et al., 2010). Gully (2009) contends "Advances in communication technology offer new and exciting opportunities to empower individuals and groups concerning their health, to significantly enhance the quality of the practice of health care and public health professionals, and to address inequalities in people's access to health information and services" (p. xxvii). Any attempt by key stakeholders to understand the application of digital technology among older population groups within a specific country context must necessarily field questions relating to access, affordability, and degree of openness surrounding the acceptance of digital technology. Paech and Lippke (2015) in their quest to promote the importance of health literacy in an age of increasing information technology offer the following commentary that has relevance for prompting health professionals, policymakers, and researchers to explore the value of initiating new approaches for advancing the health literacy concept to promote healthy aging "In the face of demographic change the older population represents an important group to look at: What helps to remain or recover their health, how can they participate in society and age successfully?" (p. 67). Stuckelberger and Vikat (2008) reporting on issues relating to the European commitment to a society for all ages state" The empowerment of older persons and the promotion of their full participation are essential for active aging, and must be enhanced through appropriate measures" (p. 2). One such measure must be the provision of education and training in the understanding, access, and application of digital technologies for the increasing numbers of people worldwide now reaching the status of "older person". While Damant, Knapp, Freddolino, and Lombard (2017) in their study relating to the effects of digital engagement on the quality of life of older people found both positive and negative impacts they also made the following projection on the likely involvement of future generations of older people with a "digital society":

> In particular, many adults today contemplating moving into the "older age" category rely much more extensively on ICT in their daily lives than do today's older people; their experiences and expectations of a "digital society" in older age will likely differ considerably. (p. 1700)

Shann and Stewart (2018) offer the following advice for advocates planning to assist older people to improve their digital technology literacy skills "To develop technologies that address older people's health needs and support their autonomy-and which also are widely accepted, adopted, and utilized-it is essential to understand older people's experiences, expectations, and concerns" (p. 266). Bashshur (2002) provides an important caveat when trying to ascertain the willingness or indeed capacity of countries to bring their respective health systems in line with available digital technologies:

> It is important to recognize, however, that health systems are unique to each society and culture-even within countries. In each instance, the system reflects: (1) a combination of cultural values and practices, (2) the extent to which science and technology are incorporated into the practice of medicine, (3) the level of health sophistication, (4) relative affluence, and (5) each society's investment in health and health care. (p. 10)

Park (2017) highlights about Australia that with "increasing penetration of information and communication technology (ICT) in all public and private realms, there is a need to examine the deeply rooted digital divide and how it is intertwined with issues of social exclusion in rural communities" (p. 399). Speyer et al. (2018) in a study of telehealth by allied health professional and nurses in remote locations report "Telehealth services may be as effective as face-to-face interventions which are encouraging given the potential benefits of telehealth in rural and remote areas with regards to healthcare access and time and cost savings" (p. 225). Earlier work by Iacono Stagg, Pearce, and Chambers (2016) supports the value-added outcomes from the use of eHealth technologies in rural Australia. In more recent times, the National Rural Health Alliance (2019) prepared a "Pre-Budget Submission 2020-2021" for attention by the Australian Government that emphasized the need for 1) urgent actions to improve the health outcomes for people living in remote areas throughout Australia 2) the establishment of a Rural Digital Initiative (RDHI) to combat ongoing barriers associated with such matters as connectivity, reliability, accessibility, affordability and digital health literacy and 3) building a sustainable capacity for digital health literacy through education and training workshops for healthcare professionals operating in rural Australia. The World Health Organization (2019) has published guidelines and recommendations on the use of digital applications that should be essential reading by all health systems planning to strengthen health literacy interventions. Penno and Gauld (2017) report that while health technologies and eHealth are seen to empower patients there remains the contentious issue that an over-emphasis on promoting independence and self-care "risks shifting the burden of care to older adult patients and informal caregivers" (p. 232). There is a pressing issue relating to the need to support informal caregivers to become more skillful in accessing available health literacy options. This is particularly important when recognition is given to the fact that family-centered care is the reality in which many older people have to

receive and manage their health information and care. Sutherland, Stickland, and Wee (2020) in a review of video consultations offer a cautionary note to counter what might appear to be an overly enthusiastic and premature acceptance of digital interventions:

> While recognizing the innovative role that digital technologies can play in strengthening the health system there is an equally important need to evaluate their contributing effects and ensure that such investments do not inappropriately divert resources from alternative, non-digital approaches. (p. 273)

The pandemic arising from COVID-19 has seen unprecedented demand from Australians for telehealth service consultations that utilize both telephone and video applications with medical and allied healthcare professionals resulting in a marked reduction of the traditional face-to-face doctor-patient interactions. It is anticipated that come post-pandemic that the preceding trend will likely remain as an accepted and well-entrenched part of the doctor-older patient consultation process. It is of course understood that while some older patients may choose to use telehealth consultations on a limited basis they may nevertheless prefer for a range of personal and health-based reasons to opt for regular face-to-face contact with healthcare professionals. Inglis and her colleagues (2010) report improved quality of life outcomes and reduced hospital admissions for people with chronic heart failure through the use of telephone support and counseling services.

While this section has examined the potential of partnering health literacy with digital technology for improving population health including the health of older adults it is important to recognize and understand that there are many pathways and approaches for relevant health information to reach people over the life course. It must be emphasized that digital type technologies must not be placed on a pedestal as a panacea to counter age-related health problems and concerns. Rather they represent a mechanism that is utilized in the right situations and circumstances and with appropriate support can be useful tools for assisting increasing numbers of people across all generations and ages to remain active, self-reliant, and committed to sustaining healthy lifestyles well into advanced old age. Perhaps in light of the exponential growth in technology and its implications for advancing health literacy a legitimate case be made for rethinking the nature of the learning process as explained by Senge (2007) in his Foreword to *Theory U,* a book on the Social Technology of Presencing in which he refers to the vision of the author, Otto Scharmer:

> Virtually all well-known theories of learning focus on learning from the past: how we can learn from what has already happened. Though this type of learning is always important, it is not enough when we are moving into a future that differs profoundly from the past. Then a second, much less well-recognized type of learning must come into play. This is what Scharmer calls "learning from the future as it emerges". (p. xvi)

The Policy Response: Selected Considerations

When any discussions and/or decisions are underway concerning policy-making and digital technologies it is important not to err on the side of assuming that the word technology is a synonym for innovation. Indeed, innovation should not be allied solely with new digital products alone. Rather, innovation should be seen in the first instance as a stand-alone concept that is associated with the development of new ideas, new approaches, new or modified applications including novel ways of thinking and behaving, that either alone or in a mix of configurations, can lead to the facilitation of action outcomes that may contribute or enhance the potential for improving some measure or aspect of human life (Eng, 2001). With the preceding viewpoint in mind, the challenge to improve health through health literacy for older people may find fertile ground for policymakers to look more closely at the opportunities and potentials for intervention arising from the growth of aging populations worldwide and the rapid advancement and growing acceptance of technological innovations per se. More than ever before policymakers are having to face a) the impact of life expectancy increases resulting from the demographic transition with concerns surrounding "primarily the capacity of older adults now and into the future to function independently" (Maddox, 1992, p. 57) b) the dynamics surrounding the promotion of health and wellness of older people (Harper, 2019; Perrier, 2015) and c) the phenomenon of "structural lag" which concerns the mismatch between the way present-day older people are aging and the current social structures that influence both individual aging and population aging (Riley, 1992; Wilmoth & Longino, 2007). Loan et al. (2018) in support of patient engagement as a foundation of genuine health care emphasize that health literacy is a global priority warranting an innovative policy approach that incorporates a focus on "three domains-practice, systems of care, and partnerships-to minimize the gap between patient skills and abilities and the demands and complexities of health care systems" (p. 98). Indeed, there has to be acceptance of the fact that there exists across all sections of populations differential levels of mismatch between the demands associated with health literacy and the skills and competencies required to understand and apply health-related knowledge and information.

A timely perspective for policymakers concerned with enhancing health literacy is offered by Jean-François Mattei a French physician, philosopher, and professor of Greek Philosophy at the University of Nice "Prevention is not well understood, probably because its challenges are not well understood" (cited in Michel et al., 2016, p. 298). At the same time, the following message from the renowned economist John Maynard Keynes presents

a challenge for key decision-makers who are often reluctant to embrace new ways of thinking and acting "The real difficulty lies not in developing new ideas, but in escaping from old ones" (cited in Deveson, 2003, p. 18).

Today many social structures are inadequately prepared to deal with and support the "rapid changes in the process of aging-changes in the strengths, as well as the numbers, of older people themselves. So far, these structures have largely failed to aid older people in developing or expressing their remarkable potential" (Riley, 1992, p. 29). In short, there are significant potentials for enhancing the health and well-being of older people for the 21st century. Policy initiatives to promote health literacy among a population need to include understandings of how both agency and structural dimensions impact the adoption or otherwise of health-related lifestyles. Cockerman (2005) emphasized the need for medical sociology to examine "the relative contributions of agency and structure in determining health lifestyles" (p. 51). Grenier and Phillipson (2014) provide an insightful discussion on the agency and structure debate and apart from suggesting that agency should be considered as operating on a continuum there is the important issue of applying more "attention to the importance of analyzing and addressing power relations where increasing marginalization and vulnerability are concerned" (p. 72). Wilmoth and Longino (2007) provide an important insight that warrants attention by policymakers "Simply responding to the projected increase in the older population is not an adequate approach for the thoughtful policymaker" (p. 5). Parker et al. (2003) see health literacy as "a policy issue at the intersection of health and education" (p. 147).

Denton and Kusch (2006) offer a cardinal rule concerning the formulation of a policy aimed at supporting the well-being of older people "To develop a policy to promote seniors" well-being, it is important to have a clear picture of the risks faced by seniors and to understand how these risks vary for different groups in society" (p. 4). The OECD (2017) in a report dealing with aging and inequality offers the following perspective "Preventing aging unequally requires a comprehensive policy approach to help individuals overcome disadvantages that could cumulate over their life course and result in bad health, low income, and poverty at old age" (p. 3). A valuable and coherent statement on policy design for an aging population is proposed by Graycar (2018) that should be noted by advocates for older people and policymakers assigned to develop policy-related initiatives to deal with societal shifts to predominantly aging populations:

In policy design, it is always important to distinguish a condition from a problem. Aging is a condition and is not necessarily a problem. One adapts one's lifestyle as one age, and conditions change. However, when there is great poverty, ill health, and dependency, these conditions change into

problems, and policy design comes into play. Understanding for whom aging is a problem is fundamental (p. 64).

Focus issues for policymakers concerning aging and health literacy include but are not limited to the following areas:

1. Recognize the diversity among family caregivers in terms of educational and socio-economic status including a) the trend that sees most caregiver education and information materials presented in a manner suitable only for a highly literate population of family caregivers (Wittenberg, Goldsmith, Ferrel, & Ragan, 2017) and b) the need for programs to inform caregivers of available networking opportunities to improve their mental and physical health knowledge for self-care as well as for their role as a family caregiver (Petrovic & Gaggioli, 2020).

2. Create policies that recognize that many community-dwelling older people live alone, and have low literacy and numeracy skills. Recognition should be given to the potential for medication mismanagement and the likelihood for increased risk of adverse side effects resulting from polymerization (Ireland, 1996; Zedler, Kakad, Colilla, Murrelle, & Shah, 2011).

3. Chinn (2014) identifies a limited vision of health literacy as it relates to people with intellectual disabilities. Geukes, Bröder, and Latteck (2019) advocate for research actions to address the shortfall in understandings and applications surrounding health literacy as it applies to people with intellectual disability (see also Geukes, Bruland, & Latteck, 2018).

4. Development and implementation of continuing education and training for healthcare professionals that focus on advancing and strengthening health literacy in relation to managing their own physical and emotional health and well-being (Larsen et al., 2019).

5. Need for policy development concerning advancing the promotion of healthy aging and health literacy within a life-course framework (Clouston et al., 2017; Kuh, Cooper, et al., 2014; Kuh, Karunananthan, et al., 2014; Rowlands et al., 2019; Walker, 2018).

Plath (2009) in an international examination of independence in old age argues that understanding independence as it relates to older people should be culturally sensitive, and as such, policymakers focusing on health and well-being in later life should note her concern for the promotion of independence as a policy principle "Provision of a range of services and resources for older people should be accompanied by adequate information and support for older people as they make decisions about services and manage the engagement and coordination of services. Many older people will require no assistance in this process; for others, the support will be vital" (p. 220). Formosa (2011) offers a promising strategy for the advancement of health literacy as it applies to older people that involves the adoption of practical policy commitments by communities to actively "engage in a coordinated approach with seniors-groups, libraries, health promotion agencies, and health care providers, to increase the access and uptake of resources that improve health literacy. Resources may range from e-learning to reading of books, magazines, and other health literature" (p. 210). Cross-country comparisons in

terms of health literacy interventions can add to the variability of approaches and thereby assist in policy development and/or modification. Indeed, close attention to what pertains elsewhere about health literacy initiatives can provide valuable insights into novel and innovative interventions. The National Research Council (2001) provides ample material on the value-added potentials emanating from conducting cross-national research to prepare for an aging world. Peerson and Saunders (2009) offer the view "The development of health literacy policies will be facilitated by better evidence on the extent, patterns and impact of low health literacy, and what might be involved in improving it" (p. 285). Bonk (2016) provides a range of innovative health models for addressing the health needs of older people, and in so doing, presents a policy challenge for societies worldwide:

> Overarching national aging frameworks, innovative policies, and public services across multiple sectors and a broader evidence-based will be required. Enabling and supporting aging populations to enjoy additional years of life in good health is a crucial consideration for policy development. (p. 20)

Interpersonal Communication: A Key Aspect of Health Literacy

The importance of language and discourse in health systems with implications for health literacy is made clear by Savundranayagam, Ryan, and Hummert (2007) "Aged-biased communication tends to reduce opportunities to demonstrate competence and to contribute to satisfying conversations…Within health care interactions, poor communication can lead to inadequate diagnosing, inappropriate treatment, and reduced compliance with lifestyle, exercise, and medication prescriptions" (p. 82). Developing communication competencies of physicians and other health care professionals can assist in the creation and facilitation of health knowledge empowerment and lead to the subsequent adoption of positive behavioral practices by older people. Ryan, Meredith, MacLean, and Orange (1995) provide a clear and professionally oriented message for the medical and allied health fraternity "Good communication is an essential component of optimal delivery of health and health promotion efforts" (p. 89). The OECD (2017) in a report entitled "Preventing Ageing Unequally" makes the point that from global perspective access to health services is not the same for everyone "Access to health care may be prevented for several reasons related either to the functioning of the health care system itself (like the cost of a doctor visit or medical treatment, the distance to the closest health care facility, or waiting lists) or to personal reasons (like fear of not being understood by the doctor or not having the time to seek care)" (p. 42). Almost twenty years ago Katz (2002) in his ground-breaking text *The Silent World of Doctor and Patient*" highlighted the importance of clear, supportive, and unambiguous communication

between medical doctors and their respective patients. message the preceding author was that "effective communication between physician and patient builds mutual trust and facilitates medical decision-making" (Tongue, Epps, & Forese, 2005, p. 656). Fineberg (2004) identifies a major communication flaw among health professionals "Arcane language and jargon that become second nature to doctors and nurses are inscrutable to many patients. Adults who have a problem understanding written materials are often ashamed and use methods to mask their difficulty" (p. ix). Belim and De Almeida (2018) emphasize the importance of sound communication competencies among healthcare professionals as being an indispensable component of patient health treatment. Speros (2009) makes a similar call for nurses to utilize clear communication skills along with the adoption of a person-centered approach when working with the highly diverse population of older adults.

A case is made by Stocks et al. (2009) for general practice to be more active in tailoring health information to patients particularly for patients deemed to have limited health literacy. Chung and Prato-Lefkowitz (2015) maintain that nursing graduates need to be aware of patients who may be deemed to be "at-risk" of not fully understanding and acting upon health information. At the same time, Chung and Prato-Lefkowitz advocate for actions to promote effective communication competence skills among nurses "This effective communication will reduce hospital readmission rates, decrease health care costs, and help close the gap between patient-nurse-provider communications. Nurse educators have a responsibility to incorporate health literacy assessment, appropriate patient education interventions, and evaluation of understanding into nursing curricula" (p.12). Loan et al. (2018) in a similar vein call for nurses to play a more dominant role to enhance health literacy while drawing attention to the situation where "health literacy is not well understood by clinicians, rarely approached as a health care system issue and is not universally executed across health care domains" (p. 97). Understanding culturally-based health beliefs should be an essential component when designing innovative health strategies and health literacy approaches for culturally and linguistically diverse communities. Lai, Tang, Chappell, Lai, and Chau (2007) in a study of the relationship between culture and health status focusing on older Chinese in Canada concluded "Interventions to improve health should focus on strategies to enhance cultural compatibility between users and the health delivery system" (p. 171). More research is required to examine the communication experience of older people across all domains of the health care system. The editors Nielsen-Bohlman et al. (2004) in their watershed text *"Health literacy: A Prescription to End Confusion"* refer to the need for health literacy policy and interventions to be embedded within a cultural context due to the understanding and recognition that "Cultural health beliefs affect how people think and feel about their health and health problems, when and from whom

they seek health care, and how they respond to recommendations for a lifestyle change, health-care interventions, and treatment adherence" (p. 109).

The challenge confronting policymakers and health professionals is to improve access to health information that is a) culturally inclusive and sensitive to individual needs and b) focused on supporting individuals and communities to confidently utilize the information as part of an empowerment process that fosters the improved application of health literacy leading to informed health decisions for everyday living. The promotion of health literacy must include the notion of health competency which is the ability to apply health literacy to manage the complex demands of modern-day health (Stocks et al., 2009). In promoting and motivating people to adopt healthy lifestyles the challenge for health professionals is to move beyond their "expertise" to be "enablers" to assist people to self-manage their health and well-being (Robinson, Newton, Jones, & Dawson, 2014). It must be fully understood that "The complex concept of health literacy acknowledges the need for assessing and addressing health literacy for every patient, every time, and in every health encounter; and ensuring patients know what they must do after all health care encounters to self-manage their health" (Loan et al., 2018, p. 98).

Conclusion

With the world now experiencing rapid technological change there exists unprecedented challenges for policymakers including recognition that there will be some segments of society that experience difficulties to access, afford and indeed understand the relevance or otherwise of how technological innovation might impact their lives. It must also be recognized that the exponential introduction of technological innovations will serve to perpetuate inequalities as well as bringing to the fore a range of ethical questions surrounding inclusiveness and participation in mainstream society. A report by the OECD (2017) highlights the value of understanding the life course and how policy initiatives of the right kind can help to counter the risks associated with unequal aging. Bonk (2016) suggests that the time has come whereby "Societies need to develop a new understanding of aging and health and decision-makers need to show their strong commitment" (p. 149). Hendricks and Powell (2009) provide an important reminder to policymakers, health professionals, and social justice advocates:

> To comprehend the underpinning of certain forms of inequalities, it is also important to examine some of the transformations that are altering people's lives. One postmodern reality of the twenty-first century is the existence of a digital divide between those who have always known how to navigate key-stroke technologies and those "ancients" who learned it later or not at all. (p. 10)

Living in an imperfect world will mean of course that health literacy initiatives will not impact people equally or fairly. However, improvements in both access and utilization of health information and services by increasing numbers of people, young and old alike, will surely be seen as an important and positive step in transforming the journey into older age. Health literacy can of course be enhanced among the aged by improved communication practices between physicians, nurses, and allied health professionals and their older patients. This will also require respect for, and appreciation of the need to have both the medical, nursing, and allied health professions acquire "cultural competence" to deal with the language and cultural barriers that arise from the diverse number of immigrants entering counties from around the world (Chappell & Provident, 2020; Darawsheh, Chard, & Eklund, 2015; Stedman & Thomas, 2011; Tongue et al., 2005).

Paakkari and Okan (2020) in response to the COVID-19 pandemic highlight the urgent need for people to acquire the correct health information to adapt their respective health behaviors "The development of health literacy is even more topical than ever to prepare individuals for situations that require a rapid reaction. Above all, health literacy should be seen concerning social responsibility and solidarity and is needed from both people in need of information and services and the individuals who provide them and assure their accessibility for the general population" (pp. e249- e250). Okan et al. (2020) reporting on an online cross-sectional representative survey on COVID-19 in Germany found "Confusion about coronavirus information was significantly higher among those who had lower health literacy (p. 1). Armitage and Nellums (2020) point out that when older people are being encouraged to "self-isolate" for perhaps long periods, there must be recognition of the likely implications arising from a perceived sense of "enforced social disconnection" leading to risks for increased anxiety, depression and the overall decline in mental health. Failure of public policy to undertake concerted efforts to promote and advance health literacy and health competency among the diverse population of older people might well be interpreted as societal neglect involving ageism, discrimination, and maleficence. Laceulle (2014) provides an important reminder for key decision-makers to engage in critical reflection on existing social structures and their respective processes that have implications for the lived experiences of older people:

> At the same time, the possibilities and the space to realize a "good life" and a "good old age" for oneself depend deeply on the opportunities and restrictions offered by the structural societal arrangements regarding aging over which individuals have very limited power of control". (p. 115)

Accepting the fact that increasing research is demonstrating that it is possible to improve health at every age, the challenge for individuals, communities, and societies worldwide are to plan and engage in positive health actions that can enhance the achievement of a healthy aging future (Loan et al., 2018; Michel et al., 2016; Stocks et al., 2009). A major developmental task of later life involves establishing a "mind-set" that balances the process of gains and losses that form the basis of the life world of older people (Featherman, 1992). Learning how to access and use health-related information and related services in the early and middle stages of the life course may engender a strong and positive developmental preparation for the tasks that will emerge in later life. The preceding viewpoint is supported by the Royal Commission into Aged Care Quality and Safety (2019) established on 8 October 2018 to inquire into the quality and safety of aged care in Australia:

> "Maintaining a healthy, active lifestyle remains the strongest contributor towards healthy aging. Although this is a choice made by individuals, governments, community organizations and health professionals also play a crucial role in encouraging people to be as healthy as possible. This will be important in reducing the time people spend dependent on aged care services". (p. 99)

In the end, it is a frame of mind established and maintained through "deliberate intervention and training at earlier points in the life course" (Featherman, 1992, p. 163) that may offer beneficial health reserves to delay the onset of functional decline and ill-health in old age. For Michel and his colleagues (2016), "The "healthy aging" pathway corresponds to a lifelong process" (p. 298). The preceding viewpoint is supported by Walker (2018) who is a strong advocate for health policy to adopt a life-course focus "The life-course perspective is essential to recognize that chronic conditions and capabilities in later life are invariably the *outcomes* of earlier life social and economic status and exposure to risk factors" (p. 265).

Health literacy is both a humanity issue and a social justice issue, while at the same time unequivocally linked to human rights and citizen empowerment. The promotion of health literacy as a global movement will require a reinvention of the policy landscape within and across all societies. However, the introduction of new policy directions in each respective health system will need to circumvent differential levels of intransigence that have stymied progress towards the advancement of health literacy. It must be understood, however, that the options taken and implemented regarding health literacy will affect the future of *"aging societies"*. Supporting pathways to healthy aging by building health literacy into an inclusive and life-course framework will necessarily introduce ethical issues and concerns relating to intergenerational equity and resource allocation (Summers & Smith, 2014). Notwithstanding the preceding implications and challenges there must

remain in place a sustained and ethically based commitment to ensure that no undertakings to advance health literacy are initiated that directly or indirectly undermine the proceeding stance articulated by the World Health Organization (2017):

> The focus on "healthy aging" should not divert attention from other areas of care that are important for older people, including those in very advanced age, such as long- term care, prevention and management of disability in old age, an age-attuned, friendly health care environment and, once people reach the end of their lives, appropriate end-of-life care. (p. 12)

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