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*Financial Literacy as Part of Empowerment  
Education for Later Life: A Spectrum of Perspectives,  
Challenges and Implications for Individuals,  
Educators and Policymakers in the Modern Digital  
Economy*

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## Review Article

Müzeyyen Çiğdem Akbaş\* and Terence Seedsman

# Financial Literacy as Part of Empowerment Education for Later Life: A Spectrum of Perspectives, Challenges and Implications for Individuals, Educators and Policymakers in the Modern Digital Economy

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**Abstract:** This contemporary-based essay provides a case for a life course approach to financial literacy education that offers a pathway for individuals to enter their later years with improved levels of financial security and savings. Financial security in older age is seen as an important factor in promoting social connectedness with implications for (a) health and well-being in later life and (b) reducing social isolation and loneliness among older people. Financial literacy is presented within the context of an ongoing life skill requiring early habit building with the need for episodic updating in light of new information and changing life circumstances. Embedding financial literacy education within a life course framework is seen as offering the opportunity to gain economic empowerment leading to long-term financial stability and independence. The notion of economic empowerment is considered as an equal right for both men and women and warrants attention by educators and policymakers to address gender-related disparities in economic security. The increasing numbers of people expected to live longer lives will create an urgent need for early planning actions to achieve financial security in older age.

**Keywords:** economic security, financial fragility, financial resilience, income adequacy, poverty cycle

## 1 Introduction

In a rapidly changing world witnessed by the explosion of information, digital technology, and rising costs of living, there exists an unprecedented need to initiate education about money management within the context of a life course approach. Financial literacy can be seen as an enabling factor that offers pathways and understandings for people to manage finances and everyday expenses (Grohmann et al., 2018). Meanwhile, Lusardi (2019) warned that the time has arrived for individuals to assume increasing responsibility for personal finances due to (a) an increase in life expectancy, (b) pension and welfare systems displaying increasing inability to meet financial targets, (c) shift of responsibility from employers to employees for funding retirement, and (e) complex array of financial products and financial advisors entering the financial marketplace. With the expansion of financial products and the emergence of sophisticated regulations, “the pursuit of financial independence requires careful planning and effective decision-making” (Gerrans & Hershey, 2013, p. 1). Likewise, Goyal and Kumar (2020) based upon their work involving a systematic review of financial literacy reported “There is a surge in access to credit and digitalisation of financial markets. Transition in the superannuation landscape, rise in longevity and long-lasting footprints of financial crises necessitate the need for financial literacy as a best practice for consumers and society, in order to channelize their finances and protect them from financial abuse” (p. 80). Hall (2008) in his address entitled *The Importance of Financial Literacy* presented in Sydney-Australia to the *Conference on Deepening Financial Capacity in the Pacific Regions* emphasised that “We need to be sure, in other words, that we are providing individuals and communities with the level of financial education needed to grasp both the benefits and pitfalls of their easier access to financial services” (p. 12).

\* **Corresponding author: Müzeyyen Çiğdem Akbaş**, Vocational School, Antalya Bilim University, Antalya, Turkey, e-mail: cigdem.akbas@antalya.edu.tr

**Terence Seedsman:** Institute of Health & Sport Victoria University, Melbourne, Australia

This article is in essence a contemporary essay aimed at promoting further scholarly interest, conversations, and engagement in both multi-disciplinary and inter-disciplinary research surrounding existing ideas, issues, challenges, and approaches surrounding the field of financial literacy within a life course framework. Using a wide range of randomly sourced material, this essay addresses the notion of financial empowerment across all ages and the need for the inclusion of innovative economic and educational approaches to support the increasing numbers of older people living longer lives. A recent work by Bialowolski et al. (2022) shows the need to engage future research across Europe to better improve understandings of the association between financial literacy and financial resilience among older people. Xue et al. (2019) meanwhile identify unacceptable levels of financial illiteracy among older Australian generations leading to a call for policymakers to initiate actions to improve the level of financial literacy for people in later life. The preceding research studies provide grounds for a moral imperative for innovative social policies and related actions to ensure older people are able to maintain good quality of life outcomes along with healthy living standards. With increasing longevity and rapid technological innovation, the issues and concerns surrounding financial decision-making for individuals, societal institutions including government, and policymakers will require attention and resolutions of the right kind. Altman (2012) argues that “The topic of financial literacy raises the issue of the potential role that might be played by education, quality information, and incentives in improving decisions. It can be argued that with a less than ideal education, information sets, and incentives, individuals cannot make the best decisions” (p. 678). In light of the preceding matters and work by Arthur (2012) on matters to do with civic responsibility, equality, and engagement with financial literacy education, it seems appropriate to ask the following question: *Is there a place for the societal deployment of emancipatory and civic focused financial literacy programs that incorporate cultural and humanistic perspectives to support citizen financial capability and security?*

According to the OECD (2019), “financial literacy is now globally acknowledged as an essential life skill and targeted financial education policy is considered to be an important element of economic and financial stability and development” (p. 7). While the main focus in this essay is on financial literacy as an important dimension of financial management behaviour, there has to be recognition and acceptance of the necessary conjunction with such matters as (a) standards and levels of numeracy and literacy across population groups (Jayaraman et al., 2018; Skagerlund et al., 2018), (b) the ever changing field of digital technology (Lyons & Kass-Hanna, 2021; Zhu et al.,

2022), and (c) individual and structural explanations of poverty and financial illiteracy (Beeghley, 1988; Shanbhag, 2022). A question deserving attention might well be: *How useful is a life course approach for promoting and researching financial literacy?* Moreover, attention needs to be given by educators and policymakers to the notion of the “digital divide” that refers to “people who have access to the Internet and those who do not” (Aartsen et al; 2012, p. 14). Over three decades ago, Featherman (1992) called for individuals and society to come to terms with the reality that change and uncertainty are constant aspects of the human experience and, in particular, stressed the need for developing adaptive capacities, security, and well-being as counter measures to the unanticipated and dynamic changes across the life course. At the same time, he emphasized the personal and societal challenges arising from the predicted numbers of people destined to transition into the period of life beyond retirement:

*The post retired society of the next decades poses many challenges for the elderly as individuals and for the creation of an equitable public policy of welfare that enhances financial security and psychological well-being over the entire life course. (p. 162)*

## 2 The Life Course: A Promotional Pathway for Financial Literacy

Today, the life course construct provides a theoretical orientation that provides an important base for multiple disciplines to study the lives of individuals and groups at particular time periods over the human life span. However, Elder et al. (2003) remind us that this was not always the case in terms of early sociological research. According to Elder, Johnson, and Crosnoe, “The life course provides a framework for studying phenomena at the nexus of social pathways, developmental trajectories, and social change” (p. 30). Conceptualizing financial well-being in a life course framework recognizes the importance of “human, social, cultural political, and economic dimensions” (Morrow-Howell & Sherraden, 2015, p. xxiii) impacting the lives of people as they travel the life journey. Life in essence is situational and circumstantial and involves a progression from birth to old age with roles and expectations including health and socio-economic status displaying constant change as the individual transitions from one phase to the next (see, for example, Hutchison, 2011; Macmillan, 2005). The challenge for financial educators is to grasp the specifics of an individual’s life journey at a particular time and place as they face the unavoidable human challenge of dealing with the “struggle between controllable and uncontrollable factors-individual identity and the inevitability of aging” (Cole & Meyer, 1991).

Education for financial literacy in the modern world might well incorporate a level of understanding and empathy for individuals and people in specific life course situations that acknowledge what Baars and Phillipson (2014) refer to as the contingent and existential limitations that emanate from “structural mechanisms that work in ways that contradict official discourses that emphasise freedom, social justice or equality” (p. 2).

Gibson et al. (2022) advocate for the implementation of financial education during multiple stages life stages, for example, the home, high school, and workplaces. Salignac et al. (2020) argue a case for improved understandings by financial education advocates of the dynamic interplay between an individual’s environment and level of financial well-being that changes in accordance with specific life stages. Of particular interest is the work of Mathur and Kasper (2019), whereby their research findings indicate that the life course framework provides valuable explanatory insights into financial solvency and later life satisfaction. The preceding research findings also highlight a positive connection between early life socialization and acquisition of mechanisms that influence savings behaviour. Future research in the area of financial literacy and the impact of digital technology might well note the work of Mollborn et al. (2021), whereby they provide useful insights on how the life course perspective offers understandings on technology use by young adults. Recalling the question “*How useful is a life course approach for promoting and researching financial literacy?*” It is quite clear that the application of a life course framework has important implications for all financial education advocates. It is also worth noting that the field of social gerontology in advancing critical discourses and research on human aging has openly adopted the value of drawing upon the life course framework:

*The life course is treated as an empirically experienced process of biological, psychological and social changes. Researchers using this conceptualizations deal with actually implemented patterns of changes in the lives of individuals and cohorts. Such research is most characteristic of sociology, psychology and pedagogy, but also occurs in demography and social policy science. (Szatur-Jaworska, 2020, p. 111)*

### 3 Financial Literacy and Empowerment: Working Explanations

A range of studies present research evidence that highlight the fact that people who are more financially literate are more predisposed to commit to planning for their retirement (Bucher-Koenen & Lusardi, 2011; Lusardi and Mitchell, 2007). The OECD INFE (2011) offered the following

definition of financial literacy “A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing” (p. 3). According to Askar et al. (2020) “Financial literacy can generally be defined as a person’s ability to understand financial concepts and the skills to manage his/her financial resources, and has recently emerged as an important component of financial reform efforts” (p. 1). Unfortunately, there exists a deficit of studies on financial literacy in developing countries compared to developed countries where financial and educational systems are more mature, sophisticated, and multifaceted. Remund (2010) argued a case for the notion of financial literacy to undergo a deeper analytical process in the interest of achieving a clearer operational definition that would enable future research to adopt a comparative sharing of results. In the meantime, he offered the following definition as a stopgap “Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions” (p. 284). For Preston (2020), financial illiteracy has major economic costs for both society and individuals and efforts to enhance financial literacy levels among the population “is central to the stability of the financial system and from an individual and societal perspective it matters for overall wellbeing” (p. 9). As such, more rigorous research is required to better understand the nuances of financial behaviour among vulnerable population groups that may lead to uncovering new strategic initiatives for advancing people’s financial well-being. Mirza et al. (2017) make a case for a life course approach for providing women relevant information on financial management as “A lack of financial literacy has far reaching implications for economic security in old age for women as it may diminish women’s ability to plan effectively for later life and/or retirement” (p. 755). Important financial issues warranting attention by young and old alike include:

- (1) Learning how to take control of money and related financial assets.
- (2) Making savings happen on a sustained basis.
- (3) Knowing how to use banks and other reputable money services.
- (4) Knowing about credit and the ability to manage debt.
- (5) Understanding the value of superannuation and how it works.
- (6) Knowing entitlements and responsibilities associated with welfare/social security payments.

- (7) Being alert to fraud, scams, abuse, and suspicious investment schemes.

Empowerment is the “process by which individuals and groups gain power, access to resources and control over their own lives. In doing so, they gain the ability to achieve their highest personal and collective aspirations and goals” (Robbins et al., 1998, p. 91). The primary building stone for empowerment is first and foremost knowledge which can be associated with specific life related domains that includes social, economic, political, organizational, workplace, cultural, and psychological (Foster et al., 2019; Khan et al., 2017). In the present context, the concept of “*economic empowerment*” is primarily concerned with the process of developing and enhancing an individual’s knowledge, awareness, and understandings relating to financial management leading ultimately to positive and effective planning and decision-making. When financially empowered, an individual is in a stronger position to adopt a proactive mindset that directs behaviour and decision-making towards building financial security for and during later life. Banerjee and Gogoi (2023) suggest that efforts to promote the financial empowerment of women in India offers the potential for improved levels of health in later life. Interestingly, the notion of empowerment has been found to be aligned with such concepts as coping skills, personal efficacy, self-confidence, and self-esteem (Inglis, 1997). A study by Tsubouchi et al. (2021) relating to empowerment in Japanese culture emphasized the need for researchers to take into account both the cultural and historical contexts that impact the empowerment of older adults. Drawing upon the field of cognitive psychology, the notion of empowerment refers to a perceived sense of control and efficacy within an individual to take positive decisions and actions to change behaviour and attitudes (Haddad & Toney-Butler, 2022). Hetling and Postmus (2014) in programming financial support services for women who were survivors of intimate partner violence aligned financial literacy with the goal of “*economic empowerment*.” Hung et al. (2012) in recognition of the gender differences between men and women in relation to financial literacy reported “Establishing and protecting economic empowerment on an equal basis for men and women has been recognised both as a basic human right, and as an issue for policymakers” (p. 10). A recent report by Mutchler et al. (2023) illustrates that older women in the United States, particularly those living alone, experience patterns of economic insecurity in retirement. The preceding researchers suggest that late life gender disparities in economic security warrant the introduction of multi-purpose policies and allied interventions. Ali et al. (2021) and Mahadi et al. (2019) present solid cases for Islamic societies

to support the empowerment of women financially by promoting and building policies that allow for genuine financial inclusion and decision-making in political, civil, economic, and socio-cultural life. Grohmann (2016) draws attention to the role of cultural factors as offering important influences on the financial literacy gender gap by highlighting that “Country specific characteristics and the country’s culture also play important roles” (p. 537). For Grohmann, the gender gap in financial literacy in many countries may be difficult to change due to longstanding cultural traditions that can only change when policymakers move to advance the educational opportunities for women in particular. There is also the concerns and issues surrounding the emotional, physical, and economic abuse and violence against women worldwide that severely compromise their financial security and well-being (Yau et al., 2021).

Following a literature review, Page and Czuba (1999) reported that empowerment should be seen as a multi-dimensional social entity that is concerned with helping people to take charge of their lives. While knowledge, skill capability, and opportunity are essential components of empowerment, there remains the need for a clearer understanding of the key factors that motivate people to change their behaviour (Haddad & Toney-Butler, 2022). Topa et al. (2018) reported that “financial management should not be conceived as only a mere consequence of knowledge and confidence to use it, but rather as the outcome of the joint influence of cognitive aspects and social influences that affect individuals” (p. 5). It must be understood, however, that inadequate financial behaviours and related decisions may well result in unanticipated consequences impacting financial well-being in later life. Empowerment whatever the focus requires the building of a collaborative and cooperative relationship between individuals and their socio-economic-political and cultural environment to generate ongoing and beneficial change. Additional research is needed on the mix of complex factors and explanations whereby some individuals are predisposed to positive financial behaviours while others due to disadvantage and marginalization are unable or simply not strongly oriented towards decision-making pertaining to economic security. Postmus et al. (2013) in their work with survivors of domestic abuse offered the following commentary that has relevance for all and sundry, particularly those who are advocates or proponents for the advancement of economic emancipation of older people including other vulnerable population groups:

*It is clear from the review of the literature that further work is needed to understand the various components of financial literacy and how financial literacy relates to economic empowerment.* (p. 277)

## 4 Aspects of Financial Literacy in Later Life

Mitchell and Lusardi (2022) warned of the danger of not thinking and planning financially for retirement as many people are destined to enter their later years in debt. Likewise, Basel et al. (2023) reported the continuing toll of financial insecurity for many Americans in their retirement years. There is of course the high level risk of giving insufficient attention to the cost of care in the later years. Conversations that should be part of financial management for people approaching retirement should be focused upon a range of challenging issues that include:

- (1) The likelihood of drawing upon home equity in meeting any future aged care costs.
- (2) The future possibility of relying on family members or friends to assist with care and financial support.
- (3) With increasing trends towards a user-pay approach to aged care, there is now the financial imperative to plan ahead for possible entry into a residential care facility.
- (4) Allocating control of personal finances and assets due to future onset of frailty and/or cognitive decline.

Perceptions pertaining to retirement income adequacy will obviously differ between individuals, and therefore, the notion of income adequacy is essentially a relative term as “one person’s adequacy maybe another person’s inadequacy” (Chen, 1974, p. 131). However, with the passage of time, a pre-retirement estimate of income being adequate may eventually be judged as being inadequate due to inflation and rising costs associated with declining health status (Gildner et al., 2019; Stoller & Stoller, 2003). The challenge confronting policymakers will involve the provision of financial systems that provide a corrective mechanism that aligns pre-retirement income of vulnerable older adults with post-retirement income that helps to maintain a relative adequacy measure of financial security. According to DeViney (1995), “Aging well is greatly influenced by opportunities presented and decisions made earlier in the life course. The opportunities presented and consequences of those decisions differ sharply by gender” (p. 183). Planning for financial security in later life must also include the understanding that the future is unpredictable and that the years ahead will undoubtedly pose many challenges and dilemmas for older people (Migliaccio, 2017). However, despite the uncertainties of the road ahead, it can be argued that “Common sense tells us that financial security constitutes an important component of well-being” (George, 1992, p. 69). A range of studies including Bucher-Koenen and Lusardi (2011) and Lusardi and Mitchell (2007) offer research evidence that demonstrates that people who

are more financially literate are more predisposed to commit to planning for their retirement. The association of older people’s income being close to or below the poverty line is not uncommon for many countries across the world and warrants policy measures to provide improved financial status for older people made vulnerable by the passage of time and adverse life-related circumstances (Foster et al., 2019; Heslop & Gorman, 2002; Price, 2006).

An interesting and pertinent finding by Barrett and Kecmanovic (2013) indicates retirees who perceive their savings to be inadequate tend to have a lowered sense of subjective well-being. While it can be argued that the connection of financial security with a sense of subjective well-being in later life is highly likely, it is also important to recognize that the relationship should be seen as relative and not absolute (Diener et al., 1993; Diener & Biswas-Diener, 2002). Subjective well-being is not solely dependent on money and financial security *per se* as a range of personal and situational circumstances impact an older person’s overall sense of subjective well-being (Jivraj et al., 2014). There is now increasing concern worldwide relating to issues surrounding increasing levels of social isolation and loneliness among older people warranting focused research attention upon the relationship between financial security and social connectedness, which is critical for healthy aging (Cruwys et al., 2019; Fakoya et al., 2020). Staying connected and productive as we age offers an abundance of opportunities to age well (Chen & Zhang, 2022; Gonzales et al., 2015). Rajola et al. (2014) contend that economic and financial well-being foster active aging, general health, and social inclusion in later life. Policymakers might well take note of a study by Nissanholtz-Gannot and Peretz-Dayana (2023) that older people on lower incomes tend to engage less frequently in social activities compared with those on higher retirement incomes. For Aronson (2019), “How and when we age, and how we experience that aging, also depends on our environment, coping mechanisms, health, behavior, wealth, gender, geography and luck” (p. 176). Topa et al. (2018) argue that “Financial literacy and decision making should be further explored to better understand how health and well-being are influenced by them during the life course” (p. 9). Research undertaken by Stewart et al. (2020) offers the challenge to further explore the association and subsequent implications of lower levels of health literacy and financial literacy on mortality in later life. Of particular importance for middle-aged and older persons is the emerging concept of “financial health literacy” which according to Leung et al. (2022) has implications for health care decision-making, physical, and psychological well-being and involves “money management, medical bill management, understanding health insurance, deciding on appropriate

health services, and planning for long-term care needs” (p. e3921). The preceding researchers draw attention to the interrelatedness between health literacy, financial literacy, and health insurance, which has significant implications for designing financial education curriculum for middle-aged and older persons.

It is interesting to note that McGill (1992) introduced the term “*financial gerontology*” as a new field of study concerned primarily with aging and financial security and well-being within a life course perspective. Publications by Cutler (2016) and Selecky and Klimczuk (2019) highlight the importance of financial gerontology in light of the effect of longevity and aging and the need to promote financial resilience of older people in retirement. Lusardi and Mitchell (2007) in their study of retirement reported that older people who planned for retirement not only had higher wealth levels but also recorded higher levels of financial literacy when compared to non-planners. It might be said that during the younger years that financial planning for the future does not rate as a high priority until the future suddenly arrives with all of its uncertainties and financial challenges (Topa et al., 2018). A significant challenge for financial literacy education is the sad but realistic situation whereby older adults are all too frequently experiencing financial abuse and exploitation. Mitchell and Lusardi (2022) speak of the “*financial fragility*” of older people and the need for them to take steps to protect their financial savings and assets from sophisticated scams and unscrupulous manipulation often from significant others including close family members (Bagshaw et al., 2013; Fraga Dominguez et al., 2022; Hall et al., 2022). Indeed, any sense of financial fragility and financial vulnerability in later life can result in detrimental levels of anxiety and stress leading to loss of independence and confidence to manage money effectively. As noted by Kadoya and Khan (2018), financial literacy education earlier in the life course can alleviate worries and anxiety in older age by assisting individuals to adopt an approach aligned to financial preparedness whereby they plan to acquire more assets and related resources in the interest of generating more income for later life. Gignac et al. (2023) make the point that notwithstanding the importance of verbal intelligence, formal education, and age that financial literacy training *per se* has an influential effect on reducing financial anxiety and stress.

## 5 Education for Financial Literacy: A Global Imperative

Planning for future financial security will always include the challenge of trying to anticipate the extent of rapid

societal change and adverse life related circumstances. For Featherman (1992), a sound investment approach for meeting the preceding challenge is offered by the adoption of a mindset that is open to nurturing personal adaptive competencies by “learning to plan and planning to learn” (p. 163). Failure to plan for financial security in later life when personal ability, education, and favourable life-related circumstances enable access to opportunities, information, resources, and support systems to do so might well be seen as an irrational decision to plan for failure. Bernheim and Garrett (2003) demonstrated that workplace financial education was linked to greater retirement savings. Meanwhile, Xiao and O’Neill (2016) observed that financial education in schools or workplaces had a positive impact on financial behaviour. Financial planning is by no means “a one-time event” and should be seen in realistic terms as requiring continuing surveillance and monitoring throughout the entire life course. The Australian Securities and Financial Commission (2011) provided a telling insight into a series of shortfalls in key financial areas warranting attention “Overall, people seem to be more knowledgeable and confident about simple, familiar finance topics (e.g. budgeting, credit, savings and debt) and less knowledgeable and confident about more complex, unfamiliar topics (e.g. investing, superannuation and saving for retirement)” (p. 4). There is no doubt that the level of individual agency, the ability to make choices, and actions takes place within an individual’s social and environmental location. Indeed, Hendricks (2012) argued that social location provides “access and opportunities to garner valued resources are affected and in turn affect how life unfolds” (p. 230). At the same time, governments and their mix of financial and educational institutions need to see financial literacy through a longevity lens to implement strategies and programs that influence the financial security of future generations of older people (Seedsman, 2022). In addition, enhancing general education accessibility could enhance financial literacy, promoting more sustainable and comprehensive economic development (Smolo et al., 2023). For financial literacy to be educationally beneficial, it must in the spirit of Freire (1986) be “transformative” in so far that it leads to the creation of meaningful knowledge and understandings that assist in facilitating changed behaviours, attitudes, and motivations in relation to the management of personal finances. Worthington (2013) in a working paper on financial literacy programs in Australia made the pointed commentary “it is clear that these financial literacy programs, with a small number of exceptions, are sometimes implemented with well-meaning but not very clearly-defined objectives” (p. 21). Around the same time, Taylor and Wagland (2013) reported that the Australian Security and Investment Commission (ASIC) was a strong advocate for the development of quality based financial education programs for consumers

and investors. Tisdell et al. (2011) draw attention to the limited focus of financial education programs on cultural issues including low-income population groups and emphasized that financial literacy educators need to “facilitate a culturally responsive and transformative learning approach” (p. 704). There is of course a range of issues and questions surrounding the training protocols, qualifications, and standards of the educators deployed to deliver curricula-based programs aligned to financial literacy. Herein lies a challenge for departments and schools of business in higher education to provide innovative programs and forward-thinking initiatives to advance the future preparation of financial educators (Bianco & Bosco, 2011; Kuntze et al., 2019). Al-Ali et al. (2024) provide a challenge for educators to empower business students in universities for digital empowerment in a rapidly changing educational landscape. According to the preceding researchers, “Technology plays a pivotal role in shaping people’s engagement with the world. Digital citizenship encompasses the responsible, ethical, and safe use of digital tools including social media, online communication platforms, and information-sharing networks” (p. 1278). No doubt the acquisition of appropriate digital skills and competencies will offer some positive advantages for dealing with financial systems and planning for financial security. In turn, Demirel (2022) throws a challenge to business operators in terms of soliciting customer satisfaction in the digital age. According to Demirel, “It is clear that digital marketing will gain more importance in the future. Accordingly, researches on how businesses will direct the preferences of certain target audiences to create demand and make their products and services more attractive will have a wide impact in the scientific world” (p. 525).

Furthermore, financial education to be effective should adopt approaches that are inclusive and focused upon “learners’ life circumstances, and to use pedagogical techniques, such as small groups, stories or FE exercises, that engage multiple dimensions of learners, rather than relying on lecture and information delivery” (Taylor et al., 2012, p. 537). A future challenge facing policy makers and educators will be to understand the levels of non-take-up of financial education programs that may be offered to a range of population groups, particularly the marginalized and socially disadvantaged (see Lucas et al., 2021). The notion of “*financial socialization*” is gaining prominence with particular focus on children and young adults accessing educational opportunities to acquire values, attitudes, knowledge, and skills relating to financial budgeting and planning (Utkarsh et al., 2020). Belinova et al. (2021) suggest that young children should experience early economic socialization, which can be best achieved by a cooperative undertaking between early childhood educators and parents. Likewise, Pape

(2022) puts forward a case for the education system to be more engaged with the task of teaching children and teenagers how to manage money as an essential preparation for dealing with the realities of financial decision-making throughout life. In essence, Pape placed financial literacy within the context of an ongoing life skill requiring early habit building with the need for episodic updating in light of new information and changing life circumstances. An emerging challenge facing financial education for children and adolescents relates to the increasing trend towards digital technology worldwide and the future likelihood of most countries embracing cashless payments for financial transactions. The “tap and go” approach to spending including the increasing trend in the use of electronic transfers has created a totally new financial landscape that is now impacting the lives of people worldwide. Previous generations learnt about money by way of direct physical contact with coins and paper money. However, with increasing consumer acceptance, reliance, and use of digital “invisible” online money, the challenge for financial education will be on how to familiarize and teach younger generations about the real value of money and the importance of prudent financial management throughout the life course. Koskelainen et al. (2023) offer a framework for future research aimed at incorporating digitalisation into financial literacy and capability programs that include recommendations targeting four main areas: (1) revising financial literacy curriculum, (2) creating new tools and approaches for teaching and learning, (3) measuring digital financial literacy, and (4) fostering collaborative partnerships between regulators and the private sector. Along with the growing interest in financial education by a range of stakeholders comes the need to deploy appropriate research methods to evaluate and disseminate the effectiveness or otherwise of programs.

Karakurum-Ozdemir et al. (2019) in their study of financial literacy in developing countries identified Mexico and Türkiye as showing large regional differences in levels of financial literacy. According to the preceding researchers each developing country should endeavour to establish financial literacy levels within their own respective population and then develop strategic policies that focus on the least financially literate groups to enhance their general levels of financial well-being. At the same time, they reported “that women, younger adults and individuals who cannot read or write in the official language of their country of residence have lower financial literacy scores” (p. 325). Atkinson and Messy (2013) draw attention to the fact that financial exclusion is an entrenched component of social exclusion, and as such, people on low incomes, disadvantaged, or marginalized due to poverty and isolation should be prime targets for financial education programs.

Future efforts to implement educational strategies and policymaking to advance the level of financial literacy should focus on the nature and characteristics of generational differences relating to financial capability and financial well-being (Muir et al., 2017; Philippas & Avdoulas, 2019; Sherwood, 2020). An examination of generational differences offers an important opportunity for key decision makers to undertake meaningful comparisons as well as understanding specific and general mindsets within and across generations in relation to financial literacy (Li, 2020; Sherwood, 2020). With each generation considered to span a 15-year time-frame, the generations of particular interest in the present context comprise Generation Y (Millennials) born from 1980 to 1994; Generation Z from 1995 to 2009; and Generation Alpha from 2010 to 2024 with Generation Beta to include those who will be born during the period 2025 to 2039. With each generation tending to live slightly longer than the previous generation combined with the longevity era in full swing, there are clear implications for early financial planning for later life (Grattan & Scott, 2016). Financial literacy and longevity knowledge often referred to as “*longevity literacy*” are both strongly associated with retirement readiness in relation to minimizing the risk of financial insecurity in older age (Yakoboski et al., 2022). The major implication accompanying longer life is the need for more financial security assisted by the opportunity to work longer. Kuhn and Prettnner (2023) provide the following caveat for policymakers and key stakeholders who fail to take steps to raise the retirement age:

*If people live longer for a constant retirement age, then the resulting increase in economic dependency could lead to a reduction in economic growth and pose a threat to the sustainability of social security systems and pension funds. (p. 39)*

## 6 Conclusion

Financial literacy should be seen as a dynamic process involving first the acquisition of sound financial knowledge, and second, the provision of equitable educational opportunities for individuals to acquire the ability, skills, competencies, and confidence to apply financial knowledge in the modern era that fosters overall economic well-being. No longer can financial literacy be seen in traditional terms as there is now the need to prepare all people across all ages to skilfully navigate the complex digital landscape. According to Arthur (2012), “Financial literacy education ought to be an act of dissensus that supports citizens who struggle to question and change

what is given in order to promote greater equality and democracy” (p. 172). It can be argued that the human right to a critical, emancipatory focus in financial education and policy-related reforms is essential for the financial well-being of future generations. According to Arthur (2012), “Financial literacy education ought to be an act of dissensus that supports citizens who struggle to question and change what is given in order to promote greater equality and democracy” (p. 172). Returning to the following question introduced at the beginning of the essay, “*Is there a place for the societal deployment of emancipatory and civic focused financial literacy programs that incorporate cultural and humanistic perspectives to support citizen financial capability and security? the answer has to be unequivocally positive.*” It is therefore imperative that financial education and policy-related reforms adopt a critical and emancipatory focus in order to facilitate the financial well-being of future generations. The importance of financial literacy in education is beyond question, yet financial literacy is still significantly low across all population groups internationally (Lusardi & Mitchell, 2011). The approach for financial literacy education within a global perspective should not be concerned with enhancing a sophisticated and high-risk engagement in money management but rather supporting the adoption of a stewardship approach that incorporates a balanced, responsible, ethical, and sustained engagement with the principles of financial literacy that enable people of all ages to achieve a lifestyle with sufficient financial resources to buffer the impact of adverse life-changing circumstances (Bosner, 2014). It should now be recognized that the life course framework offers significant value in the field of financial literacy research. At the same time, the adoption of a life course approach to financial literacy education provides an opportunity to help avoid or reduce the compounding of financial mistakes that will assuredly occur among some population groups with detrimental effects on financial security in later life. Financial education at all times must ensure the inclusion of quality information to protect the overall integrity and effectiveness of financial literacy initiatives. However, there will always be a need for strong regulatory interventions in the financial marketplace to protect vulnerable consumers against improper, fraudulent, and immoral practices (Altman, 2012; Cartwright, 2004; Cohen & Nelson, 2011; Viana, 2011; Williams, 2007). A point to note is that the emergence of new technologies may present a threat to the integrity and reputation of banking systems worldwide. Mbaidin et al. (2023) predict that the emerging field of blockchain technology has the potential to revolutionize banking practices by providing safe and transparent financial transactions that protect all participants engaging banking services. The view held by the preceding researchers

is that the application of blockchain technology is particularly relevant for developing countries as it will help to foster improved levels of trust and transparency across banking institutions.

Notwithstanding the value added outcomes of financial literacy education initiatives, there must be recognition that such programs may hold little relevance for those trapped in a poverty cycle (Kraay & McKenzie, 2014). The issue of poverty is not explained solely by limited income *per se*. For Barret et al. (2018) “it is easy to lose sight of the structural underpinnings of persistent poverty in the rush to generate cleanly identified-reduced-form impacts of interventions” (p. 16). Economic inequality is a real contributor to the widening gap between the rich and poor, the privileged, and the underprivileged. While countries worldwide have engaged lively and emotionally charged rhetoric concerning the eradication of poverty, in most cases, the problem has involved a strategic focus on expediency measures leading in most instances to the maintenance of the status quo. Policymakers, including financial and educational institutions alone and in concert with each other need to examine the existing shortfalls in their respective social and economic systems with the view of creating longer-term social investments to support vulnerable population groups in the interest of assisting their upward mobility, improved equality of opportunities to access quality education, health services and community-based support services. In the end, key stakeholders need to action financial literacy policy and educational initiatives in recognition of the following perspective offered by Muir et al. (2017):

*Individuals with higher levels of financial capability – a combination of financial knowledge, attitudes, decisions, and behaviours – are more likely to have better financial wellbeing. But financial knowledge, attitudes, decisions and behaviours influence financial wellbeing in different ways, and they mean different things to people of different ages. (p. 3)*

The promotion of a wider engagement of people planning for financial security in later life depends substantially on a shared responsibility between the political system and its related institutions and individual agency keeping in mind (a) that each individual operates “in a structural context as well as life course context” (DeViney, 1995, p. 183) and (b) the well-documented financial vulnerability of women to live in poverty in older age (Gonçalves et al., 2021; Hetling & Postmus, 2014; Hung et al., 2012; Minkler & Stone, 1985). The major issue facing countries worldwide is to “explore the limits of the possible” (Maddox, 1992, p. 66) to improve the level of responsible financial behaviour amongst their respective citizenry. With the widening of the gap between wealth and poverty, there is the attendant danger of

ignoring the structural constraints that limit or restrict individuals and families to engage in financial planning. Lusardi (2019) offers a clear and unequivocal equity stance on the human right to education from the perspective of financial education “Financial literacy should be seen as a fundamental right and universal need, rather than the privilege of the relatively few consumers who have special access to financial knowledge or financial advice” (p. 7). Unfortunately, there exists a well-established narrative that seeks to solely blame people for their impoverished situation and circumstances resulting in what might be seen as a “moral construction of poverty” (Bridges, 2017; Lugo-Ocando, 2015). The future advancement of financial literacy around the world will depend substantially on the achievement of genuine political will and sustained commitment including actions of the right kind by policymakers and educationalists to combat financial insecurity and financial illiteracy. Askar et al. (2020) argue that financial literacy programs targeted at economically and socially disadvantaged groups particularly “among women, people living in rural areas, and those with the least education” (p. 17) can help to make inroads to alleviating poverty. Understanding basic concepts of finance and related management strategies including knowledge of how the economy and government function constitutes fundamental aspects of financial education and citizenship with associated benefits of general well-being and social inclusion (Fornero & Lo Prete, 2023). At the same time, financial literacy education should be primarily focused upon the task of aligning individual and family decision making to (a) avoid problematic financial behaviours, (b) commit to a savings regime in recognition that increasing numbers of people will be living longer lives with the consequent need for financial security, and (c) foster practical ways of thinking about financial planning and financial management. Taking an ethical and moral stance in relation to the need for financial literacy education aligns comfortably with the view expressed by Lucey (2007) that the true essence of a fully participatory society requires provision of educational initiatives whereby “all participants should receive equal opportunities for understanding the processes of acquiring, managing, and developing financial resources” (p. 486). It is an unescapable fact that governments in accord with the principles of human rights, sound economic policy, and social justice have a responsibility for ensuring income security for people in older age.

Failure to address the complex and multifaceted issues and challenges relating to preparedness for financial security in later life will undoubtedly result in major global problems for political and economic systems not previously witnessed. At the same time, people worldwide will need to become

increasingly responsible for their retirement planning in full recognition that they may live longer lives in comparison to previous generations, thereby increasing the likelihood that they may outlive their savings. While it is understood that a multitude of factors are known to contribute to social isolation and loneliness in later life, there is also the need to recognize that financial security should be recognized as an effective mitigating factor (Barjaková et al., 2023). Improving the socioeconomic status of people in later life has implications for building a network of supportive and meaningful social relationships that in turn can contribute to psychological and physical well-being. The future design and establishment of healthy aging frameworks has implications for innovative public policy that must assuredly consider the complex and dynamic interrelationships between economic security, social connectedness, and the persistent and ever increasing levels of social isolation and loneliness in older age (Gyasi & Adam, 2020). It is hoped that countries worldwide can commit their attention to the humane task of developing coherent policies and related strategies for the assurance of financial security for their aging populations, both now and for the future. In closing, the following message from Lucy et al. (2015) must surely hold a strong measure of import for educators and policymakers to mobilize their planning and policy intentions to genuinely support the acquisition of improved financial literacy among all sections of their population:

*Providing equitable financial education processes for all democratic citizens acknowledges that (a) individuals do not choose the contexts in which they enter this world, (b) individual accomplishment represents a matter of environment as well as personal choices, (c) socio-economic class relates to the establishment of institutional structures and procedures that maintain a concentration of wealth. (p. x)*

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## References

- Aartsen, M., Béland, D., Edmondson, R., Ginn, J., Komp, K., Nilsson, M., Perek-Bialas, J., Sorensen, P., & Weicht, B. (2012). *Ageing in light of crises: Economic crisis, demographic change and the search for meaning (Working Paper No. 12)*. Department of Sociology, Umea University.
- Al-Ali, A., Alsmairat, M., Qawasmeh, R., Mahrakani, N., & Alhazzani, N. (2024). Exploring the role of digital citizenship and digital empowerment to advance academic performance of business. *International Journal of Data and Network Science*, 8(2), 1275–1284. doi: 10.5267/j.ijdns.2023.11.007.
- Ali, M., Ali, I., Badghish, S., & Soomro, Y. A. (2021). Determinants of financial empowerment among women in Saudi Arabia. *Frontiers in Psychology*, 12, 8. doi: 10.3389/fpsyg.2021.747255.
- Altman, M. (2012). Implications of behavioral economics for financial literacy and public policy. *Journal of Behavioral and Experimental Economics (formerly The Journal of Socio-Economics)*, 41(5), 677–690. doi: 10.1016/j.socec.2012.06.002.
- Aronson, L. (2019). *Elderhood: Redefining aging, transforming medicine, reimagining life*. Bloomsbury Publishing.
- Arthur, C. (2012). Financial literacy education for citizens: What kind of responsibility, equality and engagement? *Citizenship, Social and Economics Education*, 11(3), 163–176. doi: 10.2304/csee.2012.11.3.163.
- Askar, M. W., Ouattara, B., & Zhang, Y-F. (2020). *Financial literacy and poverty reduction: The case of Indonesia. ADBI Working Paper 1097*. Asian Development Bank Institute. <https://www.adb.org/publications/financial-literacy-poverty-reduction-caseindonesia>.
- Atkinson, A., & Messy, F. (2013). *Promoting financial inclusion through financial education: OECD/INFE Evidence, policies and practice, OECD Working Papers on Finance, Insurance and Private Pensions, No. 34*. OECD Publishing. doi: 10.1787/5k3xz6m88smp-en.
- Australian Securities and Investments Commission. (2011). *Financial literacy and behavioural change (Report No: 230)*. Australian Securities and Investment Commission (ASIC).
- Baars, J., & Phillipson, C. (2014). Introduction. In J. Baars, J. Dohmen, A. Grenier, & C. Phillipson (Eds.), *Ageing, meaning and social structure: Connecting critical and humanistic gerontology*. Policy Press.
- Bagshaw, D., Wendt, S., Zannettino, L., & Adams, V. (2013). Financial abuse of older people by family members: Views and experiences of older Australians and their family members. *Australian Social Work*, 66(1), 86–103. doi: 10.1080/0312407X.2012.708762.
- Banerjee, S., & Gogoi, P. (2023). Exploring the role of financial empowerment in mitigating the gender differentials in subjective and objective health outcomes among the older population in India. *PLoS one*, 18(1), e0280887. doi: 10.1371/journal.pone.0280887.
- Barjaková, M., Garneró, A., & d'Hombres, B. (2023). Risk factors for loneliness: A literature review. *Social Science & Medicine (1982)*, 334, 116163. doi: 10.1016/j.socscimed.2023.116163.
- Barret, C. B., Carter, R., & Chavas, J.-P. (2018). Introduction. In C. B. Barret, R. Carter, & J-P Chavas (Eds.), *Economics of poverty traps*. University of Chicago Press.
- Barrett, G. F., & Kecmanovic, M. (2013). Changes in subjective well-being with retirement: Assessing savings adequacy. *Applied Economics*, 45(35), 4883–4893. doi: 10.1080/00036846.2013.806786.

- Basel, R., Silberman, S., Tavares, J., & Wylie, M. (2023). *The 80%: The continued toll of financial security in retirement*. National Council on Ageing.
- Beeghley, L. (1988). Individual and structural explanations of poverty. *Population Research and Policy Review*, 7(3), 201–222. <http://www.jstor.org/stable/40229945>.
- Belinova, N. V., Bicheva, I., Krasilnikova, L., Khanova, T., Vyalova, N., & Baskaeva, K. (2021). The development of preschoolers' financial literacy in the cooperation of the kindergarten and the family. *SHS Web of Conferences*, 97, 01020. doi: 10.1051/shsconf/20219701020.
- Bernheim, B. D., & Garrett, D. M. (2003). The effects of financial education in the workplace. Evidence from a survey of households. *Journal of Public Economics*, 87(7–8), 1487–1519. doi: 10.1016/S0047-2727(01)00184-0.
- Bialowolski, P., Cwynar, A., & Weziak-Bialowolska-Iska, D. (2022). The role of financial literacy for financial resilience in middle-age and older adulthood. *Interantional Journal of Bank Marketing*, 40(7), 1718–1748. doi: 10.1108/IJBM-10-2021-0453.
- Bianco, C. A., & Bosco, S. M. (2011). Financial literacy: What are business schools teaching?. *Journal of Global Business Management*, 7(1): 1–8. [https://docs.rwu.edu/gsb\\_fp](https://docs.rwu.edu/gsb_fp).
- Bosner, L. (2014). *Financial stewardship: A guide to personal financial health and wellness*. Shires Press Publisher.
- Bridges, K. (2017). 1. The moral construction of poverty. In *The poverty of privacy rights* (pp. 37–64). Stanford University Press. doi: 10.1515/9781503602304-003.
- Bucher-Koenen, T., & Lusardi, A. (2011). Financial literacy and retirement planning in Germany. *Journal of Pension Economics and Finance*, 10, 565–584. doi: 10.1017/S1474747211000485.
- Cartwright, P. (2004). *Banks, consumers, and regulation*. Hart Publishing.
- Chen, L., & Zhang, Z. (2022). Community participation and subjective well-being of older adults: The roles of sense of community and neuroticism. *International Journal of Environmental Research and Public Health*, 19(6), 3261. doi: 10.3390/ijerph19063261.
- Chen, Y.-P. (1974). Retirement income adequacy. In A. N. Schwartz & I. N. Mensh (Eds.), *Professional obligations and approaches to the aged* (pp. 134–154). Charles C Thomas Publishers.
- Cohen, M., & Nelson, C. (2011). Financial literacy: A step for clients towards financial inclusion. *Commissioned Workshop Paper for the Global Microcredit Summit, 14–17 November, Valladolid-Spain* (pp. 1–34).
- Cole T. R., & Meyer, D. L. (1991). Aging, metaphor, and meaning: A view from cultural history. In G. M. Kenyon, J. E. Birren, & J. F. Schroots (Eds.), *Metaphors of aging in science and the humanities*. Springer Publishing Company.
- Cruwys, T., Haslam, C., Steffens, N. K., Haslam, S. A., Fong, P., & Lam, B. C. (2019). Friendships that money can buy: Financial security protects health in retirement by enabling social connectedness. *BMC Geriatrics*, 19, 319. doi: 10.1186/s12877-019-1281-1.
- Cutler, N. E. (2016). Twenty-five for 25: A quarter-century of financial gerontology. *Journal of Financial Service Professionals*, 70(2), 25–33.
- Demirel D. (2022). The effect of service quality on customer satisfaction in the digital age: Customer satisfaction based examination of digital CRM. *Journal of Business Economics and Management*, 23(3), 507–531. doi:10.3846/bem.2022.15328.
- DeViney, S. (1995). Life course, private pension, and financial well-being. *American Behavioral Scientist*, 39(2), 172–185.
- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. *Social Indicators Research*, 57(2), 119–169. doi: 10.1023/A:1014411319119.
- Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute. *Social Indicators Research*, 28(3), 195–223. doi: 10.1007/BF01079018.
- Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *The handbook of the life course*. Kluwer Academic/Plenum Publishers.
- Fakoya, O. A., McCorry, N. K., & Donnelly, M. (2020). Loneliness and social isolation interventions for older adults: A scoping review of reviews. *BMC Public Health*, 20, 129. doi: 10.1186/s12889-020-8251-6.
- Featherman, D. L. (1992). Developmental reserves for adaption to old age: Personal and societal agendas. In N. E. Cutler, D. W. Gregg, & M. P. Lawton (Eds.), *Aging, money, and life satisfaction: Aspects of financial gerontology*. Springer Publishing Company.
- Fornero, E., & Lo Prete, A. (2023). Financial education: From better personal finance to improved citizenship. *Journal of Financial Literacy and Wellbeing*, 1(1), 12–27. doi:10.1017/flw.2023.7.
- Foster, L., Tomlinson, M., & Walker, A. (2019). Older people and social quality: What difference does income make? *Ageing & Society*, 39(11), 2351–2376. doi: 10.1017/SQ144686X1800048X.
- Fraga Dominguez, S., Ozguler, B., Storey, J. E., & Rogers, M. (2022). Elder abuse vulnerability and risk factors: Is financial abuse different from other subtypes? *Journal of Applied Gerontology*, 41(4), 928–939. doi: 10.1177/07334648211036402.
- Freire, P. (1986). *Pedagogy of the oppressed*. Continuum.
- George, L. K. (1992). Economic status and subjective well-being: A review of the literature and an agenda for future research. In N. E. Cutler, D. W. Gregg, & M. P. Lawton (Eds.), *Aging, money, and life satisfaction: Aspects of financial gerontology*. Springer Publishing Company.
- Gerrans, P., Hershey, D. A., Australia Department of Health and Ageing, & National Seniors Productive Ageing Centre. (2013). *The role of financial literacy and financial adviser anxiety in older Australians' seeking advice*. National Seniors Productive Ageing Centre.
- Gibson, P, Sam, J. K., & Yuanstan, C. (2022). The value of financial education during multiple life stages. *Journal of Financial Counseling and Planning*, 33(1), 24–43. doi: 10.1891/JFCP-20-00017.
- Gignac, G. E., Gerrans, P., & Andersen, C. B. (2023). The association between intelligence and financial anxiety. *Personality and Individual Differences*, 203, 112015. doi: 10.1016/j.paid.2022.112025.
- Gildner, T. E., Liebert, M. A., Capistrant, B. D., D'Este, C., Snodgrass, J. J., & Kowal, P. (2019). Perceived income adequacy and well-being among older adults in six low- and middle-income countries. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 74(3), 516–525. doi: 10.1093/geronb/gbw145.
- Gonçalves, V. N., Ponchio, M. C., & Basílio, R. G. (2021). Women's financial well-being: A systematic literature review and directions for future research. *International Journal of Consumer Studies*, 45(4), 824–843. doi: 10.1111/ijcs.12673.
- Gonzales, E., Matz-Costa, C., & Morrow-Howell, N. (2015). Increasing opportunities for the productive engagement of older adults: A response to population aging. *The Gerontologist*, 55(2), 252–226. doi: 10.1093/geront/gnu176.
- Goyal, K., & Kumar, S. (2020). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45, 80–105. doi: 10.1111/ijcs.12605.
- Grattan, L., & Scott, A. (2016). *The 100 year life: Living and working in an age of longevity*. Bloomsbury Publishing.
- Grohmann, A. (2016). *The gender gap in financial literacy: Income, education, and experience offer only partial explanations*, DIW Economic

- Bulletin (Vol. 6, No. 46/47, pp. 531–537) Deutsches Institut für Wirtschaftsforschung (DIW).
- Grohmann, A., Klühs, T., & Menkhoff, L. (2018). Does financial literacy improve financial inclusion? Cross country evidence. *World Development*, 111, 84–96. doi: 10.1016/j.worlddev.2018.06.020.
- Gyasi, R. M., & Adam, A. M. (2022). Does financial inclusion predict a lower risk of loneliness in later life? Evidence from the AgeHeaPsyWel-HeaSeeB study 2016–2017. *Aging & Mental Health*, 25, 1259. doi: 10.1080/13607863.2020.1786006.
- Haddad, L. M., & Toney-Butler, T. J. (2022). *Empowerment*. Stat Pearls. <https://www.ncbi.nlm.nih.gov/books/NBK430929/>.
- Hall, K. (2008). The importance of financial literacy. *A keynote address presented at the Conference on Deepening Financial Capacity in the Pacific Regions held in Sydney, 25th August*.
- Hall, L. T., Moray, J., Gross, E., & Lichtenberg, P. A. (2022). Financial stressors and resources associated with financial exploitation. *Innovation in Aging*, 6(2), 1–10. doi: 10.1093/geroni/igac010.
- Hendricks, J. (2012). Considering life course concepts. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 67(2), 226–231. doi: 10.1093/geronb/gbr147.
- Heslop, A., & Gorman, M. (2002). *Chronic poverty and older people in the developing world. Chronic Poverty Research Centre Working Paper No. 10*. HelpAge International. Available at SSRN: <https://ssrn.com/abstract=1754499> or doi: 10.2139/ssrn.1754499.
- Hetling, A., & Postmus, J. (2014). Financial literacy and economic empowerment of survivors of intimate partner violence: Examining the differences between public assistance recipients and nonrecipients. *Journal of Poverty*, 18(2), 130–149. doi: 10.1080/0875549.2014.896308.
- Hung, A., Yoong, J., & Brown, E. (2012). Empowering women through financial awareness and education. *OECD Working Papers on Finance, Insurance and Private Pensions, No. 14*. OECD Publishing. doi: 10.1787/5k9d5v6kh56g-en.
- Hutchison, E. D. (2011). Life course theory. In R. J. R. Levesque (Eds.), *Encyclopedia of adolescence*. Springer. doi: 10.1007/978-1-4419-1695-2\_13.
- Inglis, T. (1997). Empowerment and emancipation. *Adult Education Quarterly*, 48(1), 3–17.
- Jayaraman, J. D., Jambunathan, S., & Counselman, K. (2018). The connection between financial literacy and numeracy: A case study from India. *Numeracy*, 11(2), Article 5. doi: 10.5038/1936-4660.11.2.5.
- Jivraj, S., Nazroo, J., Vanhoutte, B., & Chandola, T. (2014). Aging and subjective well-being in later life. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 69(6), 930–941. doi: 10.1093/geronb/gbu006.
- Kadoya, Y., & Khan, M. S. R. (2018). Can financial literacy reduce anxiety about life in old age? *Journal of Risk Research*, 21(12), 1533–1550. doi: 10.1080/13669877.2017.1313760.
- Karakurum-Ozdemir, K., Kokkizil, M., & Uysal, G. (2019). Financial literacy in developing countries. *Social Indicators Research*, 143, 325–353. doi: 10.1007/s11205-018-1952-x.
- Khan, M. N., Rothwell, D. W., Cherney, K., & Sussman, T. (2017). Understanding the financial knowledge gap: A new dimension of inequality in later life. *Journal of Gerontological Social Work*, 60(6–7), 487–503. doi: 10.1080/01634372.2017.1317311.
- Koskelainen, T., Kalmi, P., Scornavacca, E., & Vartiainen, T. (2023). Financial literacy in the digital age: A research agenda. *Journal of Consumer Affairs*, 57(1), 507–528. doi: 10.1111/joca.12510.
- Kraay, A., & McKenzie, D. (2014). Do poverty traps exist? Assessing the evidence. *Journal of Economic Perspectives*, 28(3): 127–148. doi: 10.1257/jep.28.3.127.
- Kuhn, M., & Pretzner, K. (2023). Rising longevity, increasing the retirement age, and the consequences for knowledge-based long-run growth. *Economica*, 90(357), 39–64. doi: 10.1111/ecca.12445.
- Kuntze, R. J., Wu, C., Wooldridge, B. R., & Whang, Y. (2019). Improving financial literacy in college of business students: Modernizing delivery tools. *International Journal of Bank Marketing*, 37(4), 976–990. doi: 10.1108/JBM-03-2018-00.
- Leung, A. Y. M., Parial, L. L. B., Szeto, S. S., & Koduah, A. O. (2022). Understanding the role of financial health literacy in midlife and old age: A scoping review. *Health & Social Care in the Community*, 30(6), e3921–e3933. doi: 10.1111/hsc.14101.
- Li, X. S. (2020). What Impacts young generations' school/college education through the lens of family economics? A review on JFEI Publications in the past ten years. *Journal of Family and Economic Issues*, 42(Suppl 1), 1–6. Advance online publication. doi: 10.1007/s10834-020-09726-4.
- Lucas, B., Bonvin, J., & Hümbelin, O. (2021). The non-take-up of health and social benefits: What implications for social citizenship? *Swiss Journal of Sociology*, 47(2), 161–180. doi: 10.2478/sjs-2021-0013.
- Lucey, T. A. (2007). The art of relating moral education to financial education: An equity imperative. *Social Studies Research and Practice*, 2(3), 486–500. doi: 10.1108/SSRP-03-2007-B0015.
- Lucy, T., Agnelio, M. F., & Laney, J. D. (2015). *A critically compassionate approach to financial literacy*. Sense Publishers.
- Lugo-Ocando, J. (2015). *Blaming the victim: How global journalism fails those in poverty*. Pluto Press. doi: 10.2307/j.ctt183p3tc.
- Lusardi, A. (2019). Financial literacy and the need for financial education: Evidence and implications. *Swiss Journal of Economics and Statistics*, 155, 1. doi: 10.1186/s41937-019-0027-5.
- Lusardi, A., & Mitchell, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, (January), 13, 35–44. doi:10.2145/20070104.
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: An overview. *Journal of Pension Economics & Finance*, 10(4), 497–508. doi: 10.1017/S1474747211000448.
- Lyons, A., & Kass-Hanna, J. (2021). A methodological overview to defining and measuring “digital” financial literacy. *Financial Planning Review*, 4(e1113), 1–19. doi: 10.1002/cfp2.1113.
- Macmillan, R. (2005). The structure of the life course: Classic issues and current controversies. *Advances in Life Course Research*, 9, 3–24. doi: 10.1016/S1040-2608(04)09001-X.
- Maddox, G. L. (1992). Aging and well-being. In N. E. Cutler, D. W. Gregg, & M. P. Powell (Eds.), *Aging, money, and life satisfaction; Aspects of financial gerontology*. Springer Publishing Company.
- Mahadi, N. A., Magli, S. A., & Muneeza, A. (2019). Islamic financial wealth management: Empowering women in Islamic societies. *International Journal of Management and Applied Research*, 6(3), 116–129. doi: 10.18646/2056.63.19-008.
- Mathur, A., & Kasper, H. (2019). Application of the life course paradigm to the study of financial solvency and financial satisfaction in later life: A comparative study of American and Dutch elderly consumers. *Journal of Global Scholars of Marketing Science*, 29(4), 409–422. doi: 10.1080/21639159.2019.1613903.
- Mbaidin, H. O., Alsmairat, M. A., & Al-Adaileh, R. (2023). Blockchain adoption for sustainable development in developing countries: Challenges and opportunities in the banking sector. *International Journal of Information Management Data Insights*, 3(2), 100199. doi: 10.1016/j.jjime.2023.100199.

- McGill, D. M. (1992). Foreword. In N. E. Cutler, D. W. Gregg, & M. P. Lawton (Eds.), *Aging, money, and life satisfaction: Aspects of financial gerontology*. Springer Publishing Company.
- Migliaccio, J. N. (2017). Planning for the utterly unexpected: Advice for the retirement advisor. *Journal of Financial Service Professionals*, 71(6), 32–37. <https://mpr.ub.uni-muenchen.de/id/eprint/105978>.
- Minkler, M., & Stone, R. (1985). The feminization of poverty and older women. *The Gerontologist*, 25(4), 351–357. doi: 10.1093/geront/25.4.351.
- Mirza, R. M., Rhyason, M., McDonald, L., Syed, M. A., Kryzanowski, L., Iafolla, V., David, K., & Dillman, A. (2017). Empowerment of older immigrant women through improved financial literacy. *Innovation in Aging*, 1(Suppl 1), 755. doi: 10.1093/geroni/igx004.2731.
- Mitchell, O. S., & Lusardi, A. (2022). Financial literacy and financial behavior at older ages. *Wharton Pension Research Council Working Papers*, 719. [https://repository.upenn.edu/prc\\_papers/719](https://repository.upenn.edu/prc_papers/719).
- Mollborn, S., Fomby, P., Goode, J. A., & Modile, A. (2021). A life course framework for understanding digital technology use in the transition to adulthood. *Advances in Life Course Research*, 47, 100379. doi: 10.1016/j.alcr.2020.100379.
- Morrow-Howell, N., & Sherraden, M. S. (2015). Introduction. In N. Morrow-Howell & M. S. Sherraden (Eds.), *Financial capability and asset holding in later life: A life course perspective*. Oxford University Press.
- Muir, K., Hamilton, M., Noone, J. H., Marjolin, A., Salignac, F., & Saunders, P. (2017). *Exploring financial wellbeing in the Australian context*. Centre for Social Impact & Social Policy Research Centre – University of New South Wales Sydney, for Financial Literacy Australia. [https://www.arts.unsw.edu.au/sites/default/files/documents/exploring\\_financial\\_wellbeing\\_australian\\_context.pdf](https://www.arts.unsw.edu.au/sites/default/files/documents/exploring_financial_wellbeing_australian_context.pdf) (accessed on 14 April 2023).
- Mutchler, J. E., Roldán, N. V., & Su, Y.-J. (2023). *Late-life gender disparities in economic security: Evidence from the 2022 elder index*. Center for Social and Demographic Research on Aging Publications. <https://scholarworks.umb.edu/demographyofaging/88>.
- Nissanholtz-Gannot, R., & Peretz-Dayana, H. (2023). Equal opportunities in aging: Income level moderates the relationship between infrequent participation in formal social activities and loneliness among older adults. *Journal of Applied Gerontology*, 42(9), 1983. doi: 10.1177/07334648231175429.
- OECD. (2019). *PISA 2021 Financial literacy analytical and assessment framework*. OECD Publishing. <https://www.oecd.org/pisa/sitedocument/PISA-2021-Financial-Literacy-Framework.pdf>.
- OECD INFE. (2011). *Measuring financial literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy*. OECD.
- Page, N., & Czuba, C. E. (1999). Empowerment: What is it. *Journal of Extension*, 37(5), 1–5.
- Pape, S. (2022). *The barefoot investor: Your epic money adventure*. John Wiley & Sons Ltd.
- Philippas, N. D., & Avdoulas, C. (2019). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance*, 26(4–5), 360–381. doi: 10.1080/1351847X.2019.1701512.
- Postmus, J. L., Plummer, S. B., McMahon, S., & Zurlo, K. A. (2013). Financial literacy: Building economic empowerment with survivors of violence. *Journal of Family and Economic Issues*, 34(3), 275–284. doi: 10.1007/s10834-012-9330-3.
- Preston, A. (2020). *Financial literacy in Australia: Insights from HILDA data*. The University of Western Australia-Public Policy Institute.
- Price, D. (2006). The poverty of older people in the UK. *Journal of Social Work Practice*, 20(3), 251–266. doi: 10.1080/02650530600931724.
- Rajola, F., Frigerio, C., & Parrichi, M. (2014). Financial well-being in active ageing. *Studies in Health Technology and Informatics*, 203, 69–77.
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*, 44(2), 276–295. doi:10.1111/j.1745-6606.2010.01169.x.
- Robbins, S. P., Chatterjee, P., & Canda, E. R. (1998). *Contemporary human behavior theory: A critical perspective for social work*. Allyn and Bacon.
- Salignac, F., Hamilton, M., Noone, J., Marjolin A., & Muir, K. (2020). Conceptualizing financial wellbeing: An ecological life-course approach. *Journal of Happiness Studies*, 21, 1581–1602. doi: 10.1007/s10902-019-00145-3.
- Seedsman, T. (2022). Living in an age of longevity: Enduring insights and perspectives for embarking on a quest for health and well-being in later life. *OBM Geriatrics*, 6(1), 1–22. doi: 10.21926/obm.geriatrics.2201195.
- Selecky, E., & Klimczuk, A. (2019). Financial gerontology. In D. Gu & M. Dupre (Eds.), *Encyclopedia of Gerontology and Population Aging*. Springer. doi: 10.1007/978-3-319-69892-2\_192-1.
- Shanbhag, A. (2022). *Exploring causes, effects, and solutions to financial illiteracy and exclusion among minority demographic groups*. *Papers 2210.11403*, arXiv.org. <https://ssrn.com/abstract=4252055>.
- Sherwood, A. R. (2020). *Differences in financial literacy across the generations*. (Doctoral dissertation). Walden University.
- Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, C., & Västfjäll, D. (2018). Financial literacy and the role of numeracy: How individuals' attitude and affinity with numbers influence financial literacy. *Journal of Behavioral and Experimental Economics*, 74, 18–25. doi: 10.1016/j.socec.2018.03.004.
- Smolo, E., Knezović, E., & Aydin, Š. (2023). Extending the concept of financial literacy: A step toward a sustainable society. *Heritage and Sustainable Development*, 5(1), 65–76. doi: 10.37868/hsd.v5i1.145.
- Stewart, C. C., Yu, L., Lamar, M., Wilson, R. S., Bennett, D. A., & Boyle, P. A. (2020). Associations of health and financial literacy with mortality in advanced age. *Aging Clinical and Experimental Research*, 32(5), 951–957. doi: 10.1007/s40520-019-01259-7.
- Stoller, M. A., & Stoller, E. P. (2003). Perceived income adequacy among elderly retirees. *Journal of Applied Gerontology*, 22(2), 230–251. doi: 10.1177/0733464803022002004.
- Szatur-Jaworska, B. (2020). The life course perspective in social gerontology. In M. Łuszczynska (Ed.), *Researching aging: Methodological challenges and their empirical background* (1st ed.) (pp. 108–117) Taylor & Francis.
- Taylor, E. W., Tisdell, E. J., & Sprow-Forté, K. (2012). Teaching financial literacy: A survey of community-based educators. *International Journal of Consumer Studies*, 36, 531–538. doi: 10.1111/j.1470-6431.2012.01105.x.
- Taylor, S. M., & Wagland, S. (2013). The Solution to the financial literacy problem: What is the answer?. *Australasian Accounting, Business and Finance Journal*, 7(3), 69–90. doi: 10.14453/aabfj.v7i3.5.
- Tisdell, E. J., Taylor, E. W., & Sprow, K. (2011). *Culturally responsive community based financial literacy education: Practical implications from a mixed methods study of financial educators*, Adult Education Research Conference. (AERC) at Toronto, Canada. <https://newprairiepress.org/aerc/2011/papers/103>.
- Topa, G., Hernández-Solís, M., & Zappalà, S. (2018). Financial management behavior among young adults: The role of need for cognitive closure in a three-wave moderated mediation model. *Frontiers in Psychology*, 9, 2419. doi: 10.3389/fpsyg.2018.02419.

- Tsubouchi, Y., Yorozuya, K., Tainosyo, A., & Naito, Y. (2021). A conceptual analysis of older adults' empowerment in contemporary Japanese culture. *BMC Geriatrics*, 21, 672. doi: 10.1186/s12877-021-02631-x.
- Utkarsh, Dr, Pandey, A., Ashta, A., Spiegelman, E., & Sutan, A. (2020). Catch them young: Impact of financial socialization, financial literacy, and attitude towards money on financial well-being of young adults. *International Journal of Consumer Studies*, 44(6), 531–541. doi: 10.1111/ijcs.12583.
- Viana, C. (2011). A critical view of the financial sector and the behaviour of people. What to do? *Finance & Bien Commun*, 39(1), 86–93. doi: 10.3917/fbc.039.0086.
- Williams, T. (2007). Empowerment of whom and what? Financial literacy education and the new regulation of consumer financial services. *Law & Policy*, 29(2), 226–256. doi: 10.1111/j.1467-9930.2007.00254.x.
- Worthington, A. C. (2013). Financial literacy and financial literacy programs in Australia. *Working Paper in Finance*. Griffith University (Queensland), Department of Accounting, Finance and Economics.
- Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies*, 40(6), 712–721. doi: 10.1111/ijcs.12285.
- Xue, R., Gepp, A., O'Neill, T., Stern, S., & Vanstone, B. (2019). Financial literacy amongst elderly Australians. *Accounting & Finance*, 59(57), 887–918. doi: 10.1111/acfi.12362.
- Yakoboski, P. J., Lusardi, A., & Hasler, A. (2022). Financial literacy and well-being in a five generation America: The 2021 TIAA Institute-GFLEC Personal Finance Index (October 24, 2022). *TIAA Institute Research Paper Series No. 2022-01*. doi: 10.2139/ssrn.4256797.
- Yau, J. H., Wong, J. Y., & Fong, D. Y. (2021). Economic abuse as a form of intimate partner violence: A literature review of the instruments and mental well-being outcomes. *Violence and Victims*, 36(4), 479–492. doi: 10.1891/VV-D-19-00082.
- Zhu, R., Paul, S., & Muck, I. (2022). Digital financial literacy as a business model: The case study of a FinTech start-up. In *Proceedings of the International Conference on Electronic Business (ICEB 2022)*, Bangkok, Thailand, October 13–17. <https://aisel.aisnet.org/iceb2022/61>.