

RESEARCH ARTICLE

A Light Purse Is a Heavy Curse: A Systematic Review

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The high level and rising cost in living standard conditions are affecting the individual's and household's savings behavior vividly in their day to day life. The general concern arises when individuals fail to address their retirement planning, problem that might affect the next generation. The need to boost financial knowledge and nurture savings behavior are essential to financial planning for retirement well-being. This current research establishes the understanding of how financial literacy influences savings habits for retirement well-being. Systematic review analysis was conducted, traced and implemented on academic databases from the period of 2006 to 2021. A total of 280 papers were identified while after exclusion protocol, 53 papers were included in the analysis and narrative synthesis was performed by the authors to consolidate the findings of the diverse studies. Findings reveal that financial literacy and savings behaviour are associated with retirement well-being, especially among working adults. In addition, family size, age, education, and geographical area were common components for both financial literacy and savings behavior literature. For retirement schemes, the contribution rates benefit package and government subsidies influenced the contributions from the individual. Moving forward, this research offers thoughts for interdisciplinary dimension as a provision for more resilience, equitable and sustainable need for retirement well-being research direction and development stream.

Keywords: Financial Literacy, Savings, Habit, Retirement, Well-being, Systematic Review

JEL classification: D1, G5

The standard of living and quality of life are often referred as the economic and social well-being of countries and their residents, and that they are the ones whom control the quality of life they want and receive. Parts of the characteristics that pertain to the quality of life include education, health care, and others that are related to a person's happiness and satisfaction. As the standard of living rises, salaries strive to catch up. In light of this, saving money is salient as one cannot predict the future. Savings also secures and safeguards

oneself from emergencies (e.g., out-of-pocket medical expenses, and sudden loss of income) and is also a means for retirement when one no longer has a job.

From a wider perspective, savings play an important role in maintaining economic growth; if the society saves too little, this will create insufficient funds available for the country to invest in social or physical infrastructures. In most countries, savings are reckoned as the pillar to several sectors of their economies. The rise in lifespan and longevity has also instigated

savings behavior significantly (Curtis et al., 2017). In Malaysia, for example the low fund rates have also turned into a vital monetary issue. It has also been reported and revealed that numerous Malaysians actually endure deficient and inadequate savings amid their retirement (Shagar, 2016).

Savings habits have been reviewed on how they influence the levels of saving or savings guidelines for numerous types of assets and that it also affects the standard and comfort of living, emergency fund, and the ability to meet monetary goals in terms of making purchases by utilizing money in the forms of credit cards instead of cash (Anong & DeVaney, 2010). On the other hand, savings habits are also related to savings motives (Fisher & Anong, 2012). Generally, saving habits do have an implication on the standard and comfort of living in life. Having financial literacy, especially in understanding how money is made, spent, and save, is crucial and prudent for monetary reserves.

In view of the aforesaid, there are some reviews indicating that the older an individual is, their financial commitment grows because to them, it is vital and significant to put aside savings for retirement, paying loans, funding children's education, and other investments (Huston, 2010). Some women are less financially literate than men, the young and old are less financially literate than the middle-age, and progressively educated people are more financially knowledgeable (Lusardi & Mitchell, 2011). Apart from these, having the knowledge, skills, and confidence are also essential to make a financial decision more rationally (Shanmugam & Abidin, 2013).

On the other hand, it is all about the person's personal money management of their daily life within the changing society in pursuing to achieving the necessary perception, developing financial literacy skills or financial knowledge and understanding the consequences of their financial decision-making on themselves, others as well as the environment (Remund, 2010). The low level of financial literacy is an issue that made people endure credit issues, which could lead to bankruptcy; by having a more significant level of budgetary proficiency, an individual can guarantee their spending and saving activities are well prioritized and accomplish a good level of financial well-being (Ali et al., 2013).

The future generations' well-being of the elderly or aging could be affected by pressured economic conditions unless they plan and arrange to save

sufficiently for their retirement. In addition, it is still quite intimidating as many working adults do not save and set aside any money or fund and do not have adequate money to buy necessities and end up borrowing, which ultimately results in debt (Webley & Nyhus, 2006).

Regardless of the investigations on wealth in connection to savings behavior and habits, efforts to systematically review these investigations are as yet lacking. Subsequently, this present article initiates to bridge the gap by understanding, identifying, and characterizing the savings behavior among the individuals. Suitable articles within the peer-reviewed literature are adopted, wherein the work bridges fundamental gaps in the literature with several systematic reviews scrutinizing the savings behavior among the individuals. The present investigation is fundamental because there are gaps of investigations that contribute to a comprehensive paradigm on the savings behavior of individuals. Moreover, the present study is crucial as the individual's savings behavior is a continuous involvement that eventually emerge to savings habit and that nurturing financial knowledge and awareness seems to be the basis to favorable financial practices and habits, in general, and retirement savings behavior, in particular (Koe & Ken, 2018). Hence, facts on where the peer-reviewed literature has focused up to this point contribute to the understanding within the gap on where the emphasis is and where attention needs to be set. For this, Lusardi and Mitchell (2014) documented an excellent overview while highlighting the importance of financial literacy across the growing literature, Gallego-Losada et al. (2021) explored the bibliometric analysis, providing lively debates on the retirement planning well-being literature stream. To construct the significant systematic review, the present article was initiated by the main research question of why savings behavior is important and what are the determinants and consequences of such behavior.

Methodology

We initially searched in several top-tier and quality journals which adopt and apply the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) or systematic literature review methods. The methodology was adopted from extant researches searching the world's premier databases such as JSTOR, SAGE, SCOPUS, and Web of Science

(WoS) platform by Clarivate analytics which are pertinent in the systematic study (Goyal & Kumar, 2020). Despite this, we also searched Google Scholar to ensure that relevant papers and articles were also retrieved for the purpose of this study. Of these searches, the systematic review papers can consist of several types such as structured review that focus on methods, theories, and constructs (Rosado-Serrano et al., 2018); framework based (Paul & Benito, 2018); hybrid-narrative with a framework for setting future research agenda in terms of reviewing articles from academic journals looking into the development and adoption of theoretical frameworks as well as the use of multilevel methods (Dabic et al., 2020); theory-based review (Gilal et al., 2019); bibliometric review (Randhawa et al., 2016); and review aiming for model or framework development (Paul & Mas, 2019). In this study, we are focusing on the systematic literature review that adopted the PRISMA procedure by Moher et al., (2009).

Search Strategy

We developed the search strategy to ensure accurate search and optimal results. We searched the electronic databases with combinations of keywords, as shown in Table 1. Keywords were used in combination, such as $a + b + c$ (“financial literacy” AND “savings behavior” AND “retirement well-being”).

Inclusion Criteria

Both the primary and secondary studies that focused on financial literacy, savings behavior and retirement well-being were eligible and fit for inclusion. Studies such as systematic review that is relevant have also been considered for inclusion. In addition, we considered the studies eligibility if they fall under the following criteria:

1. Focused on financial literacy, savings behavior, retirement, well-being, and systematic review.
2. Published between the years 2006 to 2021.
3. Studies using either quantitative, qualitative, or mixed methods.
4. Published using the English language.
5. Peer-reviewed papers reporting on original data and overview papers on the subject.

We excluded papers that did not focus on financial literacy and did not relate to savings behavior and retirement well-being. However, papers such as systematic reviews from diverse fields that are pertinent to the study are included and adopted into the study. We excluded materials such as books, chapters in books, conference working papers, reports, pamphlets, and procedia for review quality. The summary of the aforementioned is shown in Table 2.

Table 1. Databases and Key Search Terms

| Keywords | | | Databases |
|-------------------------|--------------------|----------------------------|---|
| a. “financial literacy” | b. “savings habit” | c. “retirement well-being” | Elsevier, Proquest, Web of Science, Scopus, Google Scholar, and JSTOR |

Table 2. The Inclusion and Exclusion Criteria

| Criterion | Inclusion | Exclusion |
|-----------------|--|---|
| Literature type | Scholarly journals and academic publications (peer-reviewed/referred) | Books, chapters in books, conference working papers, reports, pamphlets, and procedia |
| Language | English | Non-English |
| Time line | Between 2006 and 2021 | < 2006 |
| Focus | Financial, Saving, Behavior, Retirement, Well-being, and Systematic Review Method and Reporting (for a diverse field that is useful to adopt into the study) | Non-Business Economic & Finance |

Study Selection

We independently screened through search results in terms of titles, abstracts and keywords. Studies with potential relevancy were then retrieved, and their abstracts were examined and considered for inclusion. The full papers were subsequently reviewed to verify their inclusion. In case we disagree, these were resolved through a series of discussions to reach mutual agreements (Miti et al., 2021).

Data Extraction

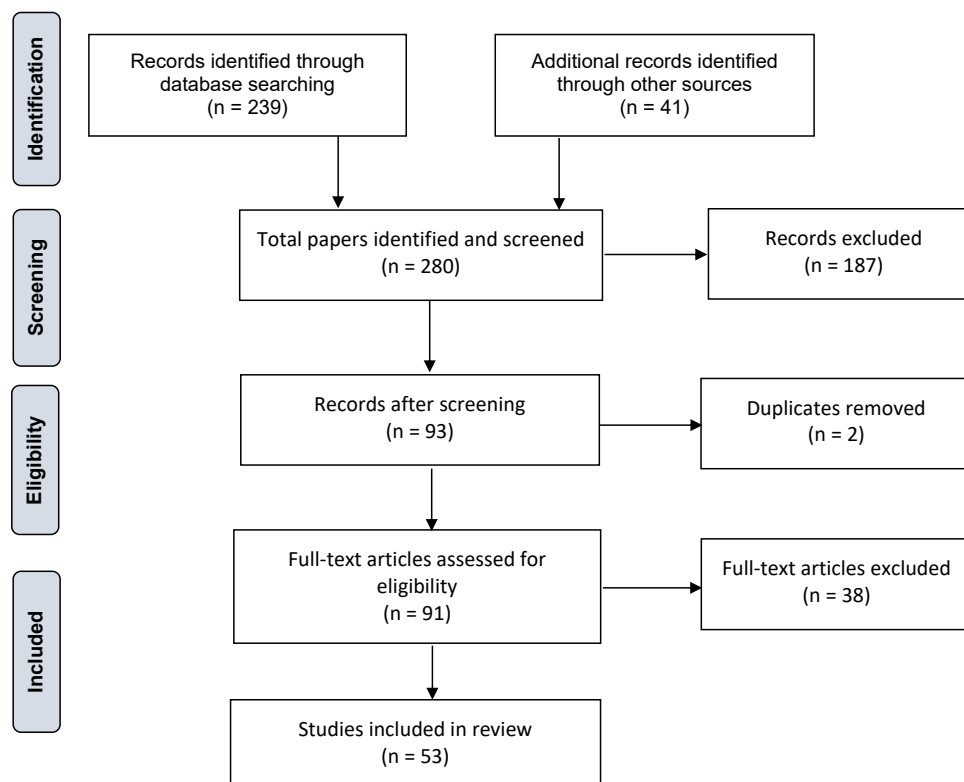
Data extraction was a repetitious process; hence, we extracted data from selected studies on financial literacy in relation to savings habits and retirement well-being. A pre-developed data extraction form was used to record the results (Table 3). We established features of the studies reviewed comprising their author, region, study design, and the method of studies, whether they were quantitative, qualitative or mixed-methods based.

Synthesis

We performed narrative synthesis to synthesize the findings of diverse studies (Popay et al., 2006). This technique was pertinent given the diverse focus of studies that were included in the review study. We synthesized the findings in the form of a thematic analysis by exploring the studies, listing, and presenting the results in a tabular form (Table 3). We then discussed the results, constructed them into themes, and summarized them in a narrative synthesis.

Results

Literature searches from academic databases generated 239 results (Figure 1). Additional 41 articles were identified through reference lists of articles yielding the total number of articles to 280. Following the title and abstract screening, 187 articles were excluded as they did not meet the inclusion criteria. Subsequent screening of the remaining 93 articles



(Adapted from Moher et al., 2009)

Figure 1. The Flow Diagram of the Study Based on PRISMA Flow Diagram

found 2 duplicates. The remaining 91 full-text articles were assessed for their eligibility and suitability for this systematic review study, and 38 of the full-text articles were excluded. Subsequent to these, 53 articles were derived and included for this systematic review study.

Of these 53 papers included, 25 were quantitative, 24 were qualitative and 4 were mixed methods, and 2 were considered as a survey of the growing literature. Overall, 28 studies were conducted in urban areas, 0 conducted in rural areas, 21 did not report any particular location, 3 were conducted in both urban and rural areas, and 1 was conducted at the military.

Out of the 53 studies, a total of 12 studies focused in the United States of America; one study focused in Japan; two studies focused in Indonesia; one study focused in Iran; one study focused in The Philippines; eight studies focused in Malaysia; one study focused in Israel; one study focused in Kenya; three studies focused in The European countries; one study focused in Sweden; one study focused in Pakistan; one study focused in Brazil; one study focused in both Brazil and The United States of America; one study focused in

both Sao Paolo and New York; one study focused in The Dominican Republic; one study focused in Poland; one study focused on the Dutch; one study focused in both Italy and The United Kingdom; one study focused in a group of countries as whole consisting The United States of America, Australia, The United Kingdom, Germany, Italy, Netherlands, Malaysia, Spain, Canada, and China; one study focused both low and middle income countries; and 11 studies did not specifically focused on country or region for their studies.

In consonance with the timeline of publication within the specified years, two articles were published in 2006, one article was published in 2009, six articles were published in 2010, five articles were published in 2011, five articles were published in 2012, six articles were published in 2013, two articles were published in 2014, two were published in 2015, four articles were published in 2016, two articles were published in 2017, four articles were published in 2018, six articles were published in 2019, five articles were published in 2020 and three articles were published in 2021. All of the studies' characteristics are exhibited in Table 3:

Table 3. *Studies Included for the Analysis*

| No | Authors | Countries or Regions | Study design | Focus | Context | Discoveries |
|----|-----------------------|----------------------|--------------|--|------------|--|
| 1 | Popay et al., 2006 | Unreported | Qualitative | Systematic review, narrative synthesis | Unreported | Type of outcomes achieved by narrative synthesis and meta-analysis |
| 2 | Webley & Nyhus, 2006 | Dutch | Qualitative | Influence of parents, children's future saving | Unreported | Children's economic behavior, and economic behavior in adulthood |
| 3 | Moher et al., 2009 | Unreported | Qualitative | Systematic review, preferred reporting items for systematic reviews and meta-analyses (PRISMA) | Unreported | PRISMA checklist, research methods, and reporting |
| 4 | Anong & DeVaney, 2010 | United States | Quantitative | Saving motives | Urban | Financial advice, adequate emergency funds |
| 5 | Dvorak & Hanley, 2010 | United States | Quantitative | Financial literacy | Urban | Retirement plan, contribution plans |
| 6 | Huston, 2010 | United States | Quantitative | Financial literacy measurement | Urban | Financial literacy, financial knowledge, and financial education |

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|----|---------------------------|--|--------------|--|---------------------|--|
| 7 | Muller & Weber, 2010 | United States | Quantitative | Financial literacy and mutual fund investments | Urban | Financial literacy, and mutual investment fund |
| 8 | Remund, 2010 | United States | Mix method | Financial literacy | Urban | |
| 9 | Worthy et al., 2010 | United States | Quantitative | Financial behavior | Urban | Financial behaviors |
| 10 | Loibl et al., 2011 | Unreported | Qualitative | Savings habit | Unreported | Financial decisions, savings program, and savings habit |
| 11 | Lusardi & Mitchell, 2011a | United States | Quantitative | Financial literacy | Urban | Financial literacy, and retirement planning |
| 12 | Lusardi & Mitchell, 2011b | Germany, the Netherlands, Sweden, Japan, Italy, New Zealand, and the United States | Quantitative | Financial literacy | Urban, and rural | Financial literacy, and retirement security |
| 13 | Robb, 2011 | Unreported | Quantitative | Financial knowledge | Urban | Financial knowledge, and credit card behavior |
| 14 | Robb & Woodyard, 2011 | United States | Quantitative | Financial knowledge | State, and military | Financial knowledge, financial behavior, and financial satisfaction |
| 15 | Fisher & Anong, 2012 | United States | Qualitative | Financial behavior | Unreported | Precautionary, and retirement motives |
| 16 | Sharahbani, 2012 | Israel | Quantitative | Financial literacy | Urban | Financial literacy level, and financial management |
| 17 | Smith et al., 2012 | United States | Mixed method | Financial sophistication | Unreported | Consumer finances |
| 18 | Wachira & Kihui, 2012 | Kenya | Quantitative | Financial literacy | Urban | Financial literacy, income levels, household size, and level of education |
| 19 | Yoong et al., 2012 | Malaysia | Quantitative | Financial literacy | Urban | Financial learning, and economic well-being |
| 20 | Ali et al., 2013 | Malaysia | Quantitative | Financial literacy | Urban | Financial planning, attitude to money, financial activities, and financial satisfaction |
| 21 | Firdmuc et al., 2013 | European countries | Qualitative | Household behavior | Urban | Currency loans of households, households' trust in local currency, and domestic financial institutions |

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|----|------------------------------------|-------------------------------|--------------|--|------------|--|
| 22 | Norvilitis & Mendes-Da-Silva, 2013 | Brazil and United States | Quantitative | Financial attitude and planned behavior | Urban | Attitude towards credit and finances |
| 23 | Post & Hanewald, 2013 | Europe | Qualitative | Retirement | Urban | Health, aging, retirement, longevity risk, and education |
| 24 | Shaari et al., 2013 | Malaysia | Quantitative | Financial literacy | Urban | Spending habit, and financial literacy |
| 25 | Taft et al., 2013 | Iran | Quantitative | Financial literacy, financial well-being, and financial concerns | Urban | Financial literacy, financial well-being, financial concerns, financial management, and economic stress |
| 26 | Cuaresma et al., 2014 | European regions | Qualitative | Economic growth | Unreported | Conditional income convergence |
| 27 | Lusardi & Mitchell, 2014 | United States | Qualitative | Financial knowledge | Unreported | Retirement, and financial decision making |
| 28 | Barrel et al., 2015 | Italy, and the United Kingdom | Qualitative | Housing, and financial wealth | Unreported | Housing wealth plays no role in Italy while it is significant in the United Kingdom, and financial wealth is significant in both these countries |
| 29 | Kapeliushnikov, 2015 | Unreported | Qualitative | Behavioral economics | Unreported | Behavioral economics, and nudge policy |
| 30 | Potrich et al., 2016 | Brazil | Quantitative | Financial literacy | Urban | Financial knowledge, financial attitude, and financial behavior |
| 31 | Randhawa et al., 2016 | Unreported | Qualitative | Bibliometric review, research agenda | Unreported | Systematic, and comprehensive review |
| 32 | Santos et al., 2016 | Sao Paolo, and New York | Quantitative | Financial well-being | Urban | Credit card use behavior, financial self-confidence, and financial well-being |
| 33 | Zulfiqar & Bilal, 2016 | Pakistan | Quantitative | Financial well-being, and goal of financial literacy | Urban | Financial literacy, working women, financial well-being, and financial attitude |
| 34 | Afonso et al., 2017 | Dominican Republic | Qualitative | Financial literacy, and financial practices | Urban | Financial literacy, financial practices, self-governance, and financial well-being |

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|----|-----------------------------|-----------------|--------------|---|------------------|---|
| 35 | Piotrowska, 2017 | Poland | Qualitative | Consumer behavior on financial security | Urban | Consumer behavior, individual consumption, and financial security |
| 36 | Koe & Ken, 2018 | Malaysia | Quantitative | Retirement savings behavior | Urban | Financial knowledge, retirement savings behavior, health, and social influences |
| 37 | Mokhtar Moga et al., 2018 | Malaysia | Quantitative | Financial literacy | Urban and rural | Income, expenses, risk, and investment understanding |
| 38 | Rosado-Serrano et al., 2018 | Unreported | Qualitative | Systematic review | Unreported | Theories, and constructs of systematic review |
| 39 | Selvadura et al., 2018 | Malaysia | Qualitative | Financial literacy education, and retirement planning | Urban | Monetary goal setting, financial exposure, financial awareness, financial literacy education, and financial retirement planning |
| 40 | Gilal et al., 2019 | Unreported | Qualitative | Intention, and behavior | Unreported | Self determination, motivation, and behavior |
| 41 | Javier Jr et al., 2019 | The Philippines | Qualitative | Aging, pension, and retirement well-being | Urban, and rural | Aging, healthcare, insurance system, income security, retirement, social protection, social pension, and retirement well-being |
| 42 | Kadoya & Rahim Khan, 2020 | Japan | Mix method | Financial literacy | Urban | Social contacts, people's future orientation, socio-economic, psychological perceptions, and financial literacy |
| 43 | Kimiyagahlamet, al., 2019 | Malaysia | Quantitative | Retirement planning behavior | Urban | Financial literacy, propensity to plan, future orientation, and savings attitude |
| 44 | Paul & Mas, 2019 | Unreported | Qualitative | Literature review writing | Unreported | Types of review articles in relation to research areas, themes, relevant theories, and empirical methods |

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|----|-----------------------------|---|--------------|--|------------|--|
| 45 | Tan & Singaravelloo, 2019 | Malaysia | Quantitative | Financial literacy, financial behavior, and retirement planning behavior | Urban | High level of financial literacy, good financial behavior, retirement, mediocre retirement planning behavior, education, and personal income positively influence financial literacy |
| 46 | Dabic et al., 2020 | Unreported | Qualitative | Study review from various academic journals | Unreported | Development and adoption of theoretical frameworks, and use of multilevel methods |
| 47 | Goyal & Kumar, 2020 | Unreported | Mixed method | Systematic review, bibliometric analysis, and financial literacy | Unreported | Thematic categorization, clustering, and mapping trends in financial literacy |
| 48 | Hauff et al., 2020 | Sweden | Qualitative | Retirement financial behavior | Unreported | Financial literacy, retirement behavior, planning, savings, and investment management |
| 49 | Khoirunnisa & Johan, 2020 | Indonesia | Quantitative | Financial literacy | Urban | Financial knowledge, financial attitude, and self-control |
| 50 | Larisa et al., 2020 | Indonesia | Quantitative | Financial literacy, and retirement planning | Unreported | Financial literacy is essential in retirement planning |
| 51 | Gallego-Losada et al., 2021 | United States, Australia, United Kingdom, Germany, Italy, Netherlands, Malaysia, Spain, Canada, and China | Qualitative | Retirement planning, financial literacy, and bibliometric analysis | Unreported | Financial literacy is an important role in society; followed by financial behavior, and retirement planning |
| 52 | Miti et al., 2021 | Low, and middle-income countries | Qualitative | Health insurance, pension scheme, and systematic review methodology | Unreported | Income, trust, willingness to pay, health insurance, and healthcare |
| 53 | Nam & Loibl, 2021 | United States | Qualitative | Financial capability, financial planning, and retirement planning | Unreported | Financial planning behaviors, retirement planning, financial education, and financial capability |

Discussion

We aimed to identify the themes associated with financial literacy in relation to savings behavior and retirement well-being among individuals around the world. These themes arose from the papers we reviewed by looking into the points, the focus, discoveries, and conclusions resulting from the studies reviewed. We have found 53 pertinent studies with mixed evidences relevant to the study review of the said themes. These studies suggested that the thematic focus comprising financial literacy, savings behavior, and retirement well-being, directly and indirectly, influence one another. We discovered that most financially literate individuals are likely to have firm savings behavior for their retirement well-being in preparing for their old age. They could understand the consequences if they do not have enough money to live their old age.

Financial literacy is the prevention of debt that it increases savings, and investment. Apart from that, it also assists in leveraging the knowledge of individuals pertaining to financial matters by providing them useful tools in financial decision-making (Potrich et al., 2016). There were some indications that the adults are more effective when it comes to financial decision-making because they have been nurtured on such knowledge since childhood: money handling, social communication with parents and society, education, practical experience as well as aspects of demographic (Lusardi & Mitchell, 2011a, 2011b; Norvilitis & Mendes-Da-Silva, 2013; Potrich et al., 2016; Robb, 2011; Santos et al., 2016).

Factors such as social and education are predictive of financial well-being as it has a protective effect on the decision of an individual; financial education can improve the conscious use of financial resources (Robb, 2011). The formation of financial savings behavior during the years of educational studies increases the individual's opportunity to achieve a better quality of life (Worthy et al., 2010). Financial knowledge from an early age reflects and contributes strongly to future social values. In some studies, it has been reflected that consumers with greater financial knowledge can plan for their personal budget, savings accounts and future financial matter. Children, for instance, are another inclusion in financial practices as the earlier the involvement is, the better their learning about spending decisions on savings when they are adults (Pires et al, 2013). Financial literacy prepares for difficult times by determining risk strategies, the use

of financial products, and plausible decision-making (Wachira & Kihui, 2012).

Studies in Japan, Bogor and the United States had suggested that demographic components such as gender, age and education; socio-economic components such as income and occupation; psychological component of perceptions; attitude and behavioral components significantly affect the level of financial literacy (Kadoya & Rahim Khan, 2020; Huston, 2010; Khoirunnisaa & Johan, 2020). Larisa et al.'s (2020) study which focused on readiness in female workers in Indonesia, found that financial literacy directly impacts retirement planning while it appears to be a significant mediator between demographical factors and future time perspective. In Brazil, a study on financial education among high school students found that this kind of study can explain the factors that have led to indebtedness as well as high welfare dependency on retirement (Afonso et al., 2017).

Piotrowska (2017) studied the social identity among consumer behaviors in examining the importance of financial security of households in Poland. Barrel et al. (2015) examined housing, wealth financials, and consumption in the United Kingdom and Italy to look into the financial crisis based on the effects of aggregate consumption. Investment products were more understandably perceived, and that financial literacy made a greater difference, which is prevalent in many countries such as Poland, Malaysia, Albania, the United Kingdom, and South Africa.

Financial level of education has a direct influence on the decision to save money (Costa & Miranda, 2013). Financial wealth exerts a positive and significant impact on aggregate demand (Barrel et al., 2015). On another note, the lack of financial literacy (or financial illiteracy) has also made impacts such as individuals unable to make for their own financial contributions (Dvorak & Hanley, 2010); no intention to control personal budget (Sharahbani, 2012); financial dissatisfaction (Yoong et al., 2012); irresponsible financial management behavior (Robb & Woodyard, 2011); irresponsible credit card usage (Robb, 2011); and extensive purchases of actively managed funds regardless of high expenses (Muller & Weber, 2010).

There is also an indication that the individual and household's savings practices are indicative of financial literacy and the consequences. There were studies that a household's savings behavior is influenced by a few factors such as economic, demographic, social, and

cultural. The households' savings behavior from the behavioral economics perspective has been studied, although most empirical studies concentrated on the socio-economic, and demographic determinants of individual savings behavior (Firdmuc et al., 2013; Cuaresma et al., 2014).

Loibl et al. (2011) combined both the economics and social psychology insights by examining the function of savings habits in regular saving. The effect of individuals' awareness of longevity risk on savings behavior has also been studied (Post & Hanewald, 2013). On another note, a study focused on financial behavior in the United States that suggested factors such as gender, age, education, income, and occupation were found positively correlated to the financial behavior of individuals (Worthy et al., 2010).

There was a study about financial well-being closely associated with financial knowledge and the attitude of individuals in Pakistan (Zulfiqar & Bilal, 2016). The study in the Philippines discovered that young, middle-aged adults are more understanding and knowledgeable about old age, and retirement well-being (Javier et al., 2019). A study about retirement savings behavior in Malaysia suggested that the retirement savings behavior resulted from financial literacy (Koe & Ken, 2018), which was well supported by Tan and Singaravelloo (2020). Recently, Nam and Loibl (2021) argued the need for financial capability intervention, particularly for a vulnerable lower-income group.

Conclusions

This systematic review of financial literacy among individuals worldwide appeared to interplay in an intricate web of relations that influences financial literacy for savings behavior, particularly for pension and retirement well-being. Components such as age, gender, educational background, income level, and geographical area are all pertinent to financial literacy and savings behavior. Sturdy engagement strategies such as broadening pension and retirement schemes shall be taken into account acknowledging the intricate circumstances behind financial literacy. The engagement shall consider the need to tackle the financial knowledge, especially working adults, on the importance of savings in view of their financial planning for their old age and retirement well-being. On that account, the engagement strategies should

look into raising financial awareness, strengthening the knowledge of working adults for successful and graceful aging, and retirement well-being among working adults. Along this line, the responsibility to decide for one's retirement plan is crucial as "A light purse is a heavy curse" which results in long-term consequences for individuals and the entire society. Moving forward, this research offers thoughts for interdisciplinary dimension as a provision for more resilience, equity, and sustainable need for retirement well-being research direction and development stream.

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APPENDIX

List of relevant scholarly articles/papers used for systematic review

| Journal title | Number of articles | References |
|--|--------------------|--|
| Journal of International Development | 1 | Afonso, et al. (2017) |
| International Journal of Trade, Economics and Finance | 1 | Ali, Rahman, et al. (2013) |
| Family and Consumer Sciences Research Journal | 1 | Anong & DeVaney (2010) |
| Journal of Consumer Sciences | 1 | Khoirunnisaa & Johan (2020) |
| Research Journal of Finance and Accounting | 1 | Zulfiqar & Bilal (2016) |
| Regional Studies | 1 | Cueresma, et al. (2014) |
| Journal of Socio-Economics | 1 | Dvorak & Hanley (2010) |
| Journal of Banking and Finance | 1 | Firdmuc, et al. (2013) |
| Journal of Financial Counseling and Planning | 2 | Fisher & Anong (2012); Kimiyagahlam, et al. (2019) |
| Interdisciplinary Journal of Contemporary Research in Business | 1 | Shaari, et al., (2013) |
| Journal of Consumer Policy | 1 | Hauff, et al., (2020) |
| Journal of Consumer Affairs | 2 | Huston (2010); Remund (2010) |
| International Business Review | 1 | Paul & Mas (2019) |
| International Journal of Business and Society | 1 | Koe & Ken (2018) |
| Journal of Economic Psychology | 2 | Loibl, et al. (2011); Webley & Nyhus (2006) |
| Journal of Pension Economics and Finance | 3 | Lusardi & Mitchell (2011a); Lusardi & Mitchell (2011b); Kadoya & Rahim Khan (2020) |
| Journal of Wealth Management and Financial Planning | 1 | Mokhtar et al. (2018) |
| Schmalenbach Business Review | 1 | Muller & Weber (2010) |
| Journal of Business Theory and Practice | 1 | Norvilitis & Mendes-Da-Silva (2013) |
| International Journal of Business and Management | 1 | Taft et al. (2013) |
| Journal of Accounting and Administration | 1 | Piotrowska (2017) |
| Journal of Economic Behaviour and Organisations | 1 | Post & Hanewald (2013) |
| Management Research Review | 1 | Potrich et al. (2016) |
| DLSU Business and Economics Review | 1 | Javier et al. (2019) |
| Journal of Family and Economic Issues | 3 | Robb (2011); Worthy et al. (2010); Nam & Loibl (2021) |
| Journal of Financial Counseling and Planning | 2 | Robb & Woodyard (2011); Smith et al. (2012) |
| International Journal of Consumer Studies | 2 | Santos et al. (2016); Goyal & Kumar (2020) |
| Journal of Economics and Finance | 1 | Sharahbani (2012) |
| International Journal of Business and Social Science | 1 | Wachira & Kihui (2012) |

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| Journal of Management and Sustainability | 1 | Yoong et al. (2012) |
| Journal of Business Research | 2 | Dabic et al. (2020); Rosada-Serrano et al. (2018) |
| | | Gallego-Losada et al. (2021) |
| Finance Research Letters | 1 | Gilal, Zhang et al. (2019) |
| European Management Journal | 1 | Larisa et al. (2020) |
| Review of Behavioral Finance | 1 | Lusardi & Mitchell (2014) |
| Journal of Economic Literature | 1 | Miti et al. (2021) |
| International Journal of Social Economics | 1 | Popay et al. (2006) |
| Methods BR | 1 | Randhawa et al. (2016) |
| Journal of Product Innovation Management | 1 | Selvadurai et al. (2018) |
| Malaysian Online Journal of Education Management | 1 | |
| International Journal of Public Administration | | Tan & Singaravello (2019) |
| Russian Journal of Economics | 1 | |
| International Review of Financial Analysis | | Kapeliushnikov (2015) |
| The PRISMA Group PLoS Med | 1 | Barrel, Constatini and Meco (2015) |
| | 1 | Moher, Liberati and Altmon (2009) |
| | 1 | |
| Total | 53 | |