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ASEAN-wide Research Network on Ageing Report



SERIES 2: ASEAN RESEARCH ON AGEING

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FOREWORD

Research has been conducted in several ASEAN member states (AMS) to identify the major challenges of ageing such as health, housing, financial support, and care for older persons. Based on these in-country research findings, policies and programs have been developed to harness the energies of older persons, increase their productivity, and integrate them into the nation's development process. However, there are still a few AMS that are lagging due to financial constraints and lack of expertise to conduct research on ageing.

Problems of in-country research findings and best practices on ageing are not widely shared among ASEAN member states due to limited networking among researchers, lack of standardization in research protocols and limited regional forums to facilitate the sharing of research findings and best practices. Due to this, ASEAN-wide Research Networking on Ageing or ARNA has been established in 2019, initiated by the National Population and Family Development Board (NPFDB), under the purview of the Ministry of Women, Family and Community Development, Malaysia. This project was sponsored by Japan-ASEAN Integration Fund (JAIF).

The objectives of ARNA are to establish a common, cohesive and sustainable ASEAN research agenda on issues pertaining to ageing through exchanges of knowledge, experiences, best practices; identify priority research area on ageing in Southeast Asian region; the development of a standardized research protocol in ASEAN and the establishment of a network of ASEAN experts and researchers on ageing. By end of this project, NPFDB commissioned three main outputs as follows:

- i. Population Ageing Statistics & Ageing-related Policies / Laws and Programs / Service
- ii. Research, Priority on Research Area & List of Experts on Ageing
- iii. Standardized Research Protocol on Ageing demographic in ASEAN countries.

Each output is documented in an individual document that presents the findings of the activities conducted. Additional work is needed to review the implementation and impact on ageing across the region.

NPFDB and JAIF would like to thank respective ASEAN Country Directors and associates for their support in providing information and giving advice on this project.

Thank you.

Abdul Shukur Abdullah

Regional Project Director of ARNA

Director General

National Population and Family Development Board

Ministry of Women, Family and Community Development

EXECUTIVE SUMMARY

This report presents the compilation of research activities in ASEAN countries that covers inter- and multi-disciplinaries field range from economic, health, social, psychosocial and environment.

Ageing Research in ASEAN is one of the three outcomes from the ASEAN-wide Research Network on Ageing (ARNA) project. This project was initiated by the National Population and Family Development Board (NPFDB), supported by the Japan-ASEAN Integrated Fund (JAIF).

The data was gathered during ASEAN regional workshop organized in Kuala Lumpur, Malaysia in October 2019. The event was attended by ARNA country directors, experts, and researchers on ageing and older persons from ASM. At the end of the workshop, the main research priority areas in ageing have been outlined.

The report presents three main findings which are:

1. Compilation of ageing research in ASEAN
2. Main research agenda in ageing
3. Database of researchers that work in ageing and older persons

This report will be able to connect researchers to collaborate in the field of multidisciplinary ageing and be able to encourage interdisciplinary research more widely. The network of collaboration is not only with researchers but can be extended to policy makers, community-based organizations that work with older persons, and older persons to translate the research findings en masse.

1.0 INTRODUCTION

Research has been conducted in several ASEAN member states (AMS) to identify the major challenges of ageing such as health, housing, financial support, and care for older persons. Based on these in-country research findings, policies and programmes have been developed to harness the energies of older persons, increase their productivity and integrate them into the nation's development process. However, there are still a few AMS that are lagging due to financial constraints and lack of expertise to conduct research on ageing.

Currently, research capacity and data on ageing are limited in the region, thus hampering the ability of national governments to formulate effective policies, resource allocation, and programme development. In-country research findings and best practices are also not widely shared among AMS to help a country advance its policies and programmes for the aged. Due to a lack of standardisation in research protocols such as methodology, common definition, and terminology, it is rather difficult to do cross-country comparisons among AMS.

The establishment of ASEAN-wide Research Networking on Ageing is useful for ASEAN in moving forward the ASEAN Socio-Cultural Community (ASCC) Blueprint's Action Line C.1.ix "Facilitate and exchange research and studies in gerontology and medicine for the elderly". The Brunei Darussalam Declaration on Strengthening Family Institution: Caring for the Elderly adopted at the Seventh ASEAN Ministerial Meeting for Social Welfare and Development (7th AMMSWD) in November 2010 also echoed the need to "facilitate the conduct and exchange of research and studies in gerontology and geriatrics" in the region.

1.1 The 2nd Regional Workshop for the Establishment of ASEAN-Wide Research Networking on Ageing

The 2nd Regional Workshop for the Establishment of ASEAN-Wide Research Networking on Ageing was held on 2 - 3 October 2019. This two-day workshop was organized by the National Population and Family Development Board with the support of the Malaysian Research Institute on Ageing, Universiti Putra Malaysia (MyAgeing™, UPM) and the Ministry of Women, Family and Community Development, Malaysia. See Annex 1 for Workshop Programme.

A total of 22 participants attended the workshop. Participation was by invitation only. Each member state was represented by the appointed County Director and research experts on ageing. The list of participants is in Annex 2.

Each participating country presented their respective country paper and provided recommendations on priority areas towards ASEAN regional framework of the ageing research network.

For achieving the common goal, each member state shared their countries' overview on research in ageing. The presentation was in the form of a PowerPoint presentation with the following format:

1. Introduction to Key Factors (major entities involved in research on ageing, e.g. centres on ageing, research institutes, etc.)
2. Past and Present Research on Ageing (multidisciplinary studies on old age and older person)
3. Major Issues, Challenges, and Opportunities for Older Population (including National Research Priorities for Next 5 to 10 years)
4. Conclusion

1.2 Objectives of the Workshop



The workshop was held to develop the ASEAN regional framework of the ageing research network.

More specifically, the workshop aims:

1. to establish a network of ASEAN experts and researchers on ageing (e.g. gerontology, geriatrics, and gerontechnology); and
2. to identify priority research areas on old age and ageing in the Southeast Asian region.

2.0 RESEARCH ON AGEING IN ASEAN COUNTRIES

Research on ageing provides evidence in the formulation of policies and enhance the science. All ASEAN countries appear to have census data and most countries have conducted specialized surveys on ageing (Table 1). However, a common scientific data infrastructure is not available among ASEAN countries. Comparative studies are essential to learning about the successes and failures of other countries in their attempts to deal with population ageing (Smith, 2012).

Table 1: ASEAN Countries that have conducted or are planning a dedicated or module survey on ageing

Country	Name of the Survey	Last Year Conducted
Brunei Darussalam	National Study on Elderly Persons in Brunei Darussalam (NSEP)	Survey in planning
Cambodia	Survey of the Elderly in Cambodia	2004
Indonesia	Indonesia Family Life Survey (IFLS)	2012
Malaysia	Malaysia Ageing and Retirement Survey (MARS)	2018-19
Myanmar	JAGES survey Myanmar	Ongoing
	Myanmar Ageing Survey (MAS)	2012
Philippines	Longitudinal Study of Ageing and Health in the Philippines	2018
Singapore	Panel on Health and Ageing of Singaporean Elderly (PHASE)	2009, 2011, 2015
Thailand	Panel Survey on Health Ageing and Retirement in Thailand (HART)	HART Wave 3 conducted in 2019
Vietnam	Viet Nam Ageing Survey	2011, 2019

Source: Statistical indicators relevant to ageing and age-disaggregated data in Asia and the Pacific*, First consultation of ESCAP member States on the Asia-Pacific Fourth Review and Appraisal of the Madrid International Plan of Action on Ageing: process, survey, data and policies. 6 and 7 May 2021, Bangkok, Thailand (Virtual meeting). Available at: https://www.unescap.org/sites/default/d8files/event-documents/Working%20paper%20on%20indicators%20relevant%20to%20ageing_20210421%20.pdf (Last accessed August 7, 2021).

This section is based on:

1. The country paper presentation at the 2nd Regional Workshop for the Establishment of ASEAN-Wide Research Networking on Ageing;
2. Communication with the Country Directors; and,
3. Web review exercise.

As a result, the findings might be seen as a precursor to countries reviewing their national agenda. It is crucial to emphasize that this report does not purport to provide an exhaustive picture of current developments in the country reviewed.

2.1 Brunei Darussalam

The ageing population is set to become major societal development for Brunei. It would have spillover effects on financial markets, transportation, social welfare as well as healthcare. Research is useful to address the impact of an ageing population in Brunei, while also taking into consideration cross-cutting issues that are unique to the sultanate.

2.1.1 Research Data

Regular data on ageing in Brunei:

- Household Income and Expenditure Survey
- Population and Housing Census
- Economic Census
- Labour Force Survey

Administrative and demographic data:

- Vital statistics (DOS, JAKIM)
- Housing (DOS)
- Marriage and Divorce (DOS, JAKIM)
- Employment (DOS)
- Health (MOH, DOS)
- Welfare (TAB)

National Study on Elderly Persons 2019 (NSEP 2019) is the first study on the older persons in Brunei Darussalam which is conducted at the state level. The purpose of the study is to identify and observe different dimensions of the aged population; to obtain the basic data on the elderly; and, to use data for developing and implementing effective social-economic policies to address the trends emerging out of population ageing.

GIS (Geographical Information System) on the Database of the Elderly is another major project which will provide a comprehensive information system of the older persons in terms of the geographical location and older population as a whole.

Brunei has developed a five- to ten-year National Research Priorities on Aging. Brunei aims to research in four areas: biogerontology, social and economic resources; environments of ageing, and; healthy ageing and well-being (Figure 1).

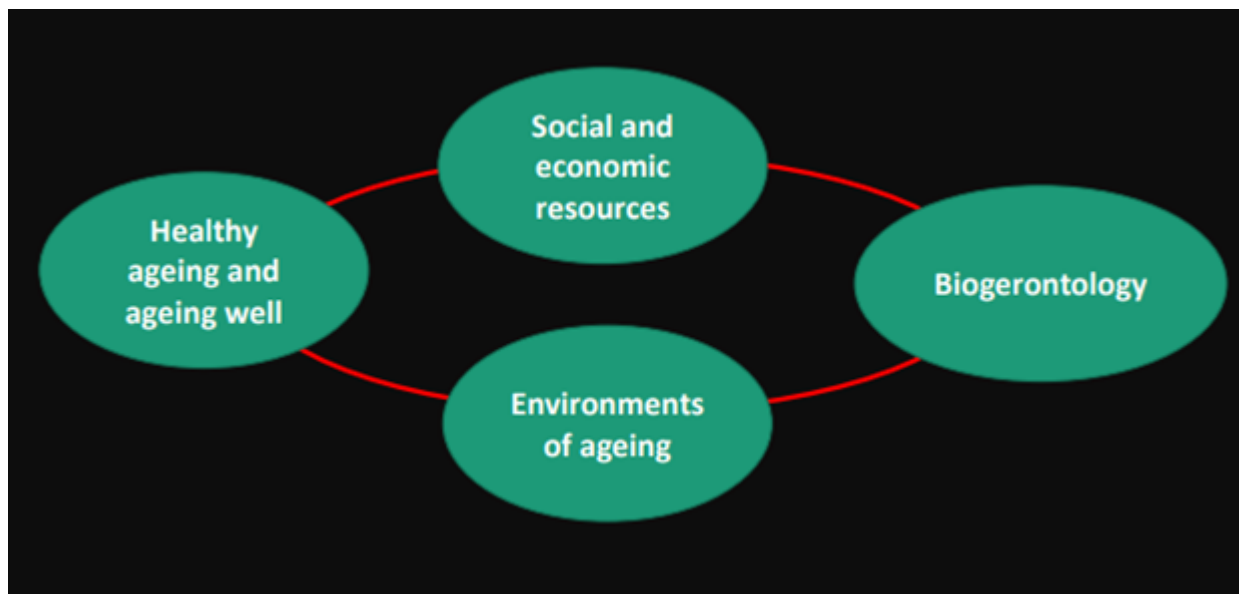


Figure 1: Road Map for Ageing Research in Brunei for 5 to 10 years

The national research priorities for the next 5 to 10 years will also focus on:

Ageing-in-Place	Ageing-in-place as an independent living lifestyle - require high-quality built environments Also, include house design output based on Universal Design (UD) principles.
Ageing with Technology	Examine the Technology that relates to ageing-in-place related to the mobility factor (high tech wheelchair, etc), health tech devices to monitor health conditions.
Home Care of the Elderly	Provide health service, community services for the non-ambulant and aged sick too, cared for in the community for as long as possible- directly trains family members to take care of the elderly at home.
GIS (Geographical Information System) Database	A comprehensive information system of the elderly in terms of the geographical location

2.1.2 Research Network

Research is mainly led by the various ministries in Brunei. However recent developments have seen NGOs and community groups are working collaboratively in collecting data on the older persons at the local and district level. Table 2 lists the key stakeholders in ageing research.

Table 2: Stakeholders in ageing research

NGOs and Community	Government/Ministries	Institutions
Demensia Brunei	Ministry of Health	University Brunei Darussalam
Brunei Council On Social Welfare	Ministry of Culture, Youth and Sports	Yayasan Sultan Hassanal Bolkiah
La Vida Berhad	Ministry of Education	
Humanitarian Emergency Aid Response Team (HEART)	Ministry of Development	
	Department of Economic Planning and Statistics, Ministry of Finance and Economy	

2.1.3 Issues and Challenges

Major issues on ageing:

- Older persons are more vulnerable to exclusion and poverty
- Low collaboration between relevant stakeholders
 - Role of volunteers – in providing help and assistance to older persons
 - Role of education – providing long-life learning
 - Centralized social services for responding to the elderly needs
 - Transportation – transfers between home to other facilities
 - Private sector – housing design incorporate needs of the elderly, involvement in older person health – e.g health insurance
- One-stop agency or ministry of social services for older persons
- Maintaining Concept of ‘Birrul Walidayin’ - ‘filial’ to their parents
 - The changing pattern of the family structure also influences the design of the house
 - Fragmentation of family- due to movement to different locations
 - Dysfunctional families can create mental health and instability among older persons
 - Children providing financial support to parents
- Financial planning and independence
 - Start thinking about saving for old age
- Importance of being independent and self-reliant (mentally, physically healthy and active)
- Helpers included as part of a functional family

Future opportunities and challenges:

- Limitations of family and family support policy
- Roles of governmental authorities in older person welfare
 - Enabling and supportive environments
- Roles of the private sector in the context of an ageing society
 - Housing choices, insurance
 - Promotion of ageing marketplace (industry) to enhance the economic vitality
 - Use of technology
- Financing ageing society, especially pension and long-term care issues
- Ageing on an urban transect – from rural to urban; the great diversity in the ways ageing occurs adds a spatial complexity to the share of the ageing urban population

2.2 Cambodia

The Royal Government of Cambodia in the 6th legislative mandate strongly commit to lift the well-being and quality of life of old people with specific measures including:

- Implementation of the first phase Action Plan (2018-2020) of the NAP
- Strengthening coordination at the National and subnational levels for the implementation of the NAP
- Strengthening roles and responsibilities of the OPAs
- Establishing Law on Older Persons
- Strengthening cooperation with local partners such as HelpAge Cambodia, United Nations Fund for Population Agency (UNFPA), JICA, KOICA. Also, building a network with ASEAN, Korea, Japan and other partners.

2.2.1 Research Data

The 2004 Survey of Elderly in Cambodia (SEC) provides a basic but comprehensive demographic, social, economic and health profile of Cambodia's older population. It is a representative survey of persons age 60 and over conducted in Phnom Penh and the five largest provinces. As such it represents the first comprehensive examination of the situation of Cambodian elders based on a widely representative sample. The traumatic history of social dislocation, civil strife and political violence that the current generation of elders survived is evident in the fact that over two-fifths lost at least one child and close to one-fourth of the women lost a spouse during the short but lethal period of Khmer Rouge rule during 1975-79. Given the lack of alternatives, Cambodian elders rely heavily on filial support as indicated by high levels of coresidence and contributions of modest amounts of money and material goods from children. Both the economic situation and health of Cambodian elders are generally quite unfavourable reflecting the pervasive poverty and underdevelopment of the country in general. The results point to a need for greater recognition on the part of the government and aid agencies of the needs and potential contribution of this important but hitherto largely ignored segment of the population (Knodel, et al., 2005).

2.2.2 Issues and Challenges

Challenges faced by the older person in Cambodia are health problems (depression, hypertension), poor living, lack of nutrition, dearth of knowledge on ageing, gender discrimination in the workforce, and lack of income. As a result, addressing the challenges of meeting their needs in old age, such as pension, nutrition, and health care, is critical.

2.3 Indonesia

Indonesia has to be prepared to become an advanced ageing nation by understanding the need and demands of the older population as the country's population ages rapidly. This may be accomplished through research.

2.3.1 Research Data

Datasets and records on older Indonesian are available from the following resources:

No.	Agency	Datasets
1.	Central Bureau of Statistics (Badan Pusat Statistik-BPS) https://www.bps.go.id	1. The Indonesian Population Census 2020 2. Indonesia National Socioeconomic Survey (<i>Survei Sosial Ekonomi Nasional-SUSENAS</i>)
2.	National Population and Family Planning Board (<i>Badan Kependudukan dan Keluarga Berencana Nasional-BKKBN</i>) http://www.bkkbn.go.id	1. Indonesia Demographic and Health Survey 2. Indonesia Special Demographic and Health Survey 2012
3.	Ministry of Health (Kemenkes) https://www.kemkes.go.id	1. Indonesia Health Map 2. Indonesia Health Profile
4.	Ministry of Social Affairs (MoSA) https://kemensos.go.id	1. Unified Data Base for Social Protection Programs (UDB) 2. Social Welfare Data
5.	Centre for Ageing Studies, University of Indonesia https://cas.ui.ac.id/	1. Research projects 2. Policy contributions

Major and current research on older persons in Indonesia:

- The Situation of the Elderly in Indonesia and Access to Social Protection Programs: Secondary Data Analysis, 2020
 - Provides a situational analysis of the elderly nationally and in three provinces, namely DKI Jakarta, DI Yogyakarta, and Bali. The research report serves as a reference in improving and developing a comprehensive Indonesian social protection system, especially for the elderly.
- The Indonesian Family Life Survey (IFLS)
 - The Indonesian Family Life Survey (IFLS) is an ongoing longitudinal survey in Indonesia conducted by RAND, Survey Meter and the Center for Population and Policy Studies, University of Gadjah Mada. The IFLS is designed to provide data for studying behaviours and outcomes. The survey contains a wealth of information collected at the individual and household levels, including multiple indicators of economic and non-economic well-being. Longitudinal survey representative of about 83% of the Indonesian population and containing more than 30,000 individuals in 13 of 27 provinces in the country. First conducted in 1993, it was designed as a household survey of individuals at least 26 years of age. The survey includes Health Service for the Elderly in its Community Modules.
- Ageing in Indonesia: Dementia and Memory Study Including ‘Tempe’ Consumption¹
 - Tempeh consumption has been linked to the improvement of cognitive function in older people. This experimental study involved a total of 90 respondents, who were divided into 3 groups: group A (consuming 100 g of Tempeh A/day), group B (consuming 100 g of Tempeh B/day), and group C (control). The intervention was given for 6 months. Both Tempeh A or Tempeh B consumption for 6 months appeared to be beneficial in improving the global cognitive function of older people with MCI. Consuming Tempeh A, which had a lower number of microorganisms, was also associated with an improvement in the language domain.
- Ageing in Displacement: East Timorese Diasporas in Indonesia²
 - This project explores the lived experiences of older people in the context of protracted displacement. It examines the forced migration, and subsequent relocation, of East Timorese former refugees in Indonesia and considers the challenges that they face from a life-course perspective. Globally, older people are among the most vulnerable groups of refugees and displaced persons. However, their needs and experiences specific to the conditions of growing old, such as the ageing body and declining mobility, among others, as well as the cultural expectations associated with ageing in a given context, are frequently overlooked.

¹Handajani Y, S, Turana Y, Yogiara Y, Widjaja N, T, Sani T, P, Christiano G, A, M, Suwanto A (2020). Tempeh consumption and cognitive improvement in mild cognitive impairment. *Dement Geriatr Cogn Disord*, 49:497-502. Available at doi: 10.1159/000510563 (Accessed August 5, 2021)

²Victoria Kumala Sakti (2020). Aging in Timorese Exile: (Im)mobilities of care and intergenerational relationships. *Journal of Intergenerational Relationships*, 18:3, 301-319. Available at doi: 10.1080/15350770.2020.1787039 (Accessed August 5, 2021)

- Loneliness in the elderly³
 - Factors: loss of attention figures; loss of social interaction (no friend to share); left by people they loved
 - Coping strategies: self-control method, and positive reappraisal method

2.3.2 Issues and Challenges

Source of finance is among the challenges faced by older persons in Indonesia. The majority of the older population in Indonesia do not have income security and a high number of them are still working due to limited access to pension. Indonesia is an example of a country that will become old before becoming rich, where financial schemes are not sufficiently available, and where job opportunities for older persons are still limited (Rahardjo et al., 2009). Active ageing could be one of the mechanisms to alleviate the financial burden caused by the ageing population (Arifin, 2012). Figure 2 illustrates the challenges and opportunities towards an active ageing society in Indonesia.

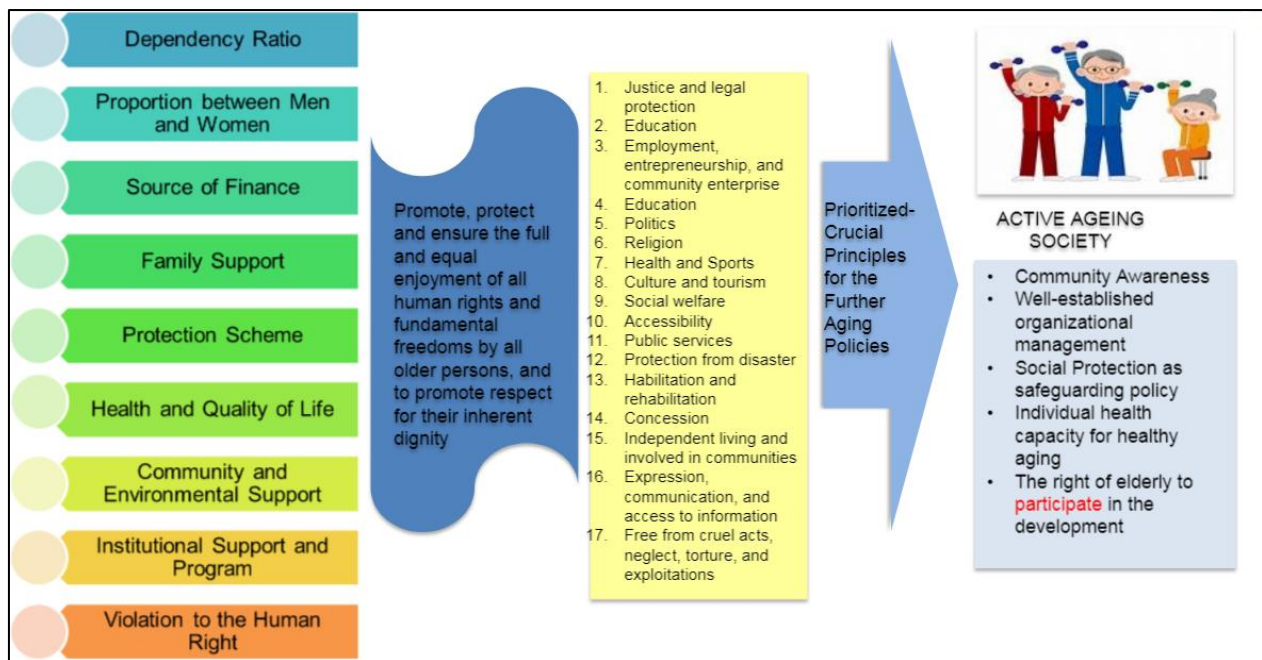


Figure 2: Challenges and Opportunities towards Active Ageing Society

2.4 Lao People's Democratic Republic

At present, Lao PDR did not have the documentation on ageing-related research projects/studies, did not have national priority research areas on ageing, and did not have country experts (e.g. gerontologists, geriatricians, researchers on old age and ageing).

³Astutik et.al. Loneliness and Psychological Well-being of Elderly in Community. Indonesian Journal of Community Health Nursing. (2019) 4(1)

In addition, The Ministry of Labour and Social Welfare, the University of Lao PDR, Lao National Academy of Social Sciences, as well as the other government, civil and private organizations did not have priority research areas on ageing, and did not have experts on ageing. There is no specialized institution focused on research on ageing in Lao PDR.

2.4.1 Issues and Challenges

Being Asia's youngest country, ageing is a new issue for Lao PDR. Legislation, strategy and action plan on ageing are not available at present. There is a dearth of understanding and awareness and ageing and older persons, as well as financial resources. As a result of the circumstances, other issues and challenges lie ahead, for example:

- No specific dataset on ageing
- Lack of Age-Friendly Environment
- Lack of innovation to support on ageing
- Lack of facilities and services for older persons

Despite these shortcomings, a pension system is available for older persons who are in the workforce that are eligible for social security scheme. Health insurance is available for older persons who are a member of the health insurance scheme and poor. There is a national committee for disabled people and older persons. At the community level, older people's group is found with the aim to improve the living conditions for older persons and for developing their communities (HelpAge, 2017).

Apart from individual and family development, ageing has a considerable influence on societal and economic development. The government along with civilians must acknowledge the issue and work together to overcome it. Pertinent and prompt policy solutions are necessary to ensure the health and well-being of older persons. Research on ageing is necessary as it will provide the greatest evidence for dealing with age-related issues.

2.5 Malaysia

In the following decades, Malaysia will be affected by a critical megatrend of rapid ageing. The country's shift from ageing to an aged society in just 20 years. It occurs at a comparable rate to other high-income nations. Growing old before becoming rich requires a comprehensive database on the aged and ageing. It will provide useful input towards the well-being of the older persons in the country.

2.5.1 Research Data

Regular data on ageing in Malaysia were from census and surveys as follow:

- Census (decennial); Household Income & Expenditure Survey (once every 4 to 5 years); Labour Force Survey (annual); Migration Survey; Economic Census; Salary & Wages Survey (DOSM)
- Financial Capability & Inclusion Survey, 2011 & 2015 (BNM)
- National Health & Morbidity Survey, NHMS I-IV, 1986 - 2019 (MOH)
- Malaysian Family & Population Survey I-V, 1974 - 2014 (decennial) (NPFDB)

Administrative or demographic data on ageing could also be obtained from:

- Vital statistics (DOSM & NRD)
- Education statistics (MOE)
- Health statistics (MOH - IKU, CRC, etc.)
- Welfare statistics, e-Bantuan (DSW)
- Housing data (MHLG, NAPIC)
- Marriage & Divorce statistics (NRD)
- Social Protection statistics (KWSP, KWAP, SOCSO, Zakat/Baitulmal)
- Societies (ROS) & Companies (ROC, SC)
- Migrant Workers statistics (MHA)
- Crime & traffic statistics (Police, MIROS)

Malaysian Research Institute on Ageing (MyAgeing™), Universiti Putra Malaysia is the national focal point for policy, research, and practice on ageing in Malaysia. Formerly known as the Institute of Gerontology, it was established in 2002 until it was rebranded by the Cabinet and upgraded into MyAgeing™ in 2015 under the 11th Malaysian Plan. The Institute has a long track record of multi-and inter-disciplinary research projects funded by both local and international agencies. Major surveys on ageing carried out by MyAgeing™ were:

- **Perception of Needs and Problems of the Elderly** (1997)
PI: *Tengku Aizan Hamid* [IRPA]; n = 1,794 (1999, 60+ 4 state [Johor, Perak, Kedah, Kelantan] study)
- **Mental Health and Quality of Life of Older Malaysians** (2003)
PI: *Tengku Aizan Hamid* [part of IRPA PR]; n = 2,780 (2005, 60+ nationwide)
- **Patterns of Social Relationships and Psychological Well-being among Older Persons in Peninsula Malaysia** (2007)
PI: *Nurizan Yahya* [eScience]; n = 1,880 (2008, 60+ 4 zones in Peninsula Malaysia study)
- **Review of the National Policy for the Elderly and Action Plan Survey** (2007)
PI: *Tengku Aizan Hamid* [MWFC]; n = 5,600 (18-25; 26-39; 40-59; 60+); n₆₀ = 1,309 (2008/09, 60+ nationwide)
- **Determinants of Wellness among Older Malaysians** (2008)
PI: *Tengku Aizan Hamid* [MOH]; n = 2,541 (2009, 60+ nationwide)
- **Consumer Behaviour and Income Adequacy among Older Consumers** (2015)
PI: *Jariah Masud* [MDTCC]; n = 4,428 (50+); n₆₀ = 2,379 (2016, 60+ nationwide)
- **Identifying Psychosocial & Economic Risk Factors & Quantifying the Costs of Age-related Cognitive Impairment: Implications of Population Ageing in Malaysia** (2013 - 2018)
PI: *Tengku Aizan Hamid* [part of LRGS TUA]; n_{baseline} = 2,322 (2013/14, 60+ 4-state study)

The Ministry of Science, Technology and Innovation (MOSTI) is the ministry tasked to champion research, development, and innovation in Malaysia. MOSTI offers four types of research fund for research institutions and universities that includes ScienceFund, TechnoFund, InnoFund, and Flagship Programme. Scopes of funding for these funds range from basic study to establish proof-of-concept (PoC), development of the prototype, pre-clinical study, and clinical trial until the commercialization of products or processes. These funds are available for researchers throughout the year.

Table 3: Research and Development Grants

No	Grant	Descriptions
1.	Steinbeis Innovation Voucher	To carry out technical and non technical research for industry players who engage Steinbeis Malaysia Foundation to help solve their industrial problems
2.	CREST, R&D Grant	Collaborative research between universities and industry to create and grow Malaysian R&D ecosystem in the Electrical and Electronics economic sector. CREST is promoting and facilitating universities and industry players to undertake collaborative research through which universities can increase their ability to produce industry-ready researchers and industry players can benefit from the finding of the research.
3	Science and Technology Research Grant	To promote Science and Technology in Malaysia through supporting deserving malaysian Scientists, young researcher and teachers/educators.
4.	Malaysia Laboratories for Academia-Business Collaboration	<ol style="list-style-type: none"> 1. Has existing (existing) product developed by academia with potential to be commercialized. 2. Product technology or process issues from industries that can be solved by the academia through mutual collaboration
5.	Acculturation Research Grant Scheme	<ol style="list-style-type: none"> 1. Produce great impact innovation for development, progress and transformation of the State 2. Transform RU Partners into a research culture through RU cooperation efforts to help speed up the research champion. 3. Establish collaborative networks between all IPTAS through collaborative research programs and projects and research facility partnerships

6.	Trans-disciplinary Research Grant Scheme	Trans-disciplinary Research Grant Scheme of the Ministry of Education aims to boost the generation of theories, concepts and new ideas that can accelerate new break-through discoveries which surpasses the boundaries of knowledge and innovative creation.
7.	Niche Research Grant Scheme of the Ministry of Education	Niche Research Grant Scheme of the Ministry of Education is a special fund that aims to help boost and develop niche research each Institutions of Higher Learning with the status of a Comprehensive University and the Focused Comprehensive University.
8.	Research Development Grant Scheme	Research Development Grant Scheme is a fund that aims to cultivate research among young researchers in Public Institutions of Higher Learning instead of Research Universities in preparation for the development of research performance in order to be competitive at the national level.
9.	Research Pledge Grant	Research Pledge Grant was created as an incentive to universities which have successfully received the grant
10.	Prototype Development Research Grant	Prototype Development Research Grant is a new program under Fundamental Research Grant Scheme, Prototype Development Research Grant was created to help bridge the gap between laboratory discovery/research up to before the pre-commercialization stage with the purpose of creating new technologies, in line with the needs of K-Economy and the implementation of the New Economic Model
11.	Long Term Research Grant Scheme	Long Term Research Grant Scheme is a fundamental research, involving more extensive scope, a long period of time and requires a high commitment. LRGS can generate theories and new ideas that advanced in a strategic niche to expand the boundaries of knowledge.
12.	Fundamental Research Grant Scheme	The objective is the development of good quality human capital and encourage the generation of theories, concepts and new ideas that can accelerate new discoveries and innovative creations.

13.	Malaysia Of Health Research Grant	Malaysia Of Health Research Grant Objectives: 1. Sponsors new scientific knowledge to improve health and improve healthcare services. 2. Support and fund R & D projects to generate new knowledge and discoveries that can serve as a catalyst for innovative technology and process development
14.	The Ministry of Science, Technology and Innovation R&D Fund	To undertake experimental development towards commercialisation by reducing valley of death To stimulate the growth and increase capability and capacity from cross-collaboration between Industry, Malaysian Government Research Institutes and Institutions of Higher Learning
15.	International Collaboration Fund	The objective of this fund is to encourage and promote co-operation in science, technology and innovation through joint research and development activities for mutual benefit. This fund is intended to assist applicant to pursue analytical validation and proof of concept on Technology Readiness Level3.

Source: <https://mastic.mosti.gov.my/statistic-category/research-and-development-grants>

Earlier in January 2021, MOSTI had introduced five new multimillion research and development (R&D) funds to help start-ups and small and medium enterprises (SMEs) to commercialise their products and services. The five new fund schemes - the Strategic Research Fund (SRF), Technology Development Fund 1 (TeD 1), TeD 2, Bridging Fund (BGF), and Applied Innovation Fund (AIF) - are offered under the Program Dana Pemacu Teknologi Strategik, also known as PEMACU. These funds are allocated through the Malaysia Grand Challenge (MGC), an initiative to boost the use of disruptive, high technology in the country.

The Malaysian Science and Technology Information Centre (MASTIC), a division under the MOSTI, provides reliable, up-to-date, and comprehensive Science, Technology and Innovation (STI) information through an efficient information management system to facilitate the National STI Policies. Research grants and incentives available under MASTIC are summarized in Table 3.

However, when compared to other study areas, research on ageing in Malaysia is still lacking. Table 4 shows the number of ageing-related research grants awarded by MOSTI from 2006 to 2016.

Table 4: Research on Ageing by Sector, 2006-2016

MOSTI	Total Projects	Ageing-related		
		S&T	M	SS
2006	1,169	2	0	1
2007	935	0	0	0
2008	415	2	1	0
2009	215	0	1	0
2010	101	0	0	0
2011	241	0	0	0
2012	~510	1	1	1
2013	~280	0	0	0
2014	~250	1	0	0
2015	~240	0	0	0
2016	~90	0	0	0

Source: Hamid, TA (2019) Desk survey of projects

2.5.2 Research Network

MyAgeing™, Universiti Putra Malaysia was mandated to monitor and coordinate the development of the field through national, regional and international networks. It was fulfilled by creating a shared platform for researchers to amplify their voices and ensure that research has an influence that extends beyond academic publications.

Consequently, an inaugural National Workshop for Development of Research Agenda on Ageing and Older Persons was held in 2006 focusing on the formulation of national research priorities. And this was followed by the National Research Agenda on Ageing in 2014 which outlined the research themes and areas of focus (Table 5).

Table 5: Research Agenda on Ageing (Institute of Gerontology, 2014)

Research Theme	Research Areas
Health HEALTHY AGEING	<ul style="list-style-type: none"> Affordability, Accessibility & Sustainability; Continuum of care (e.g. LTC, Community Care); Disease Management; Prevention, Promotion, Protection, Participation (4Ps)
Economy PRODUCTIVE AGEING	<ul style="list-style-type: none"> Poverty; Social protection; Employment; Financial security
Social ACTIVE AGEING	<ul style="list-style-type: none"> Intergenerational relationships; Abuse, neglect & maltreatment; Informal caregivers; Volunteerism and generativity
Spiritual POSITIVE AGEING	<ul style="list-style-type: none"> Mental health; End of life issues; Stress and coping (e.g. depression, suicide); Stereotypes & images of ageing, ageism; NGO and advocacy development; Lifelong learning
Environment SUPPORTIVE AGEING	<ul style="list-style-type: none"> Age-friendly environment (transport, building accessibility etc.); Ageing in place; Assistive technology; Public & private spaces for the elderly (design & planning); Disaster management

In 2015, MyAgeing™ organized the Regional Expert Forum on Ageing and Development. This is in line with previous endeavours like the ASEAN Consortium of Social Welfare Practitioners, Educators and Schools of Social Work (Manila, 2008) and the ASEAN Consortium on Department of Economics Conference (2012). The expert forum lays the groundwork for the formation of the ASEAN Research Network on Ageing (ARNA) and encourages an inter-disciplinary approach to address population ageing issues and challenges for the wellbeing of older persons in the region.



REGIONAL EXPERT FORUM ON AGEING AND DEVELOPMENT 2015

14 - 15 September 2015, Lanai Kijang, Bank Negara Malaysia, Kuala Lumpur



Malaysian Ageing Research Network (MARN) was initiated post-Regional Expert Forum on Ageing and Development 2015. It was formally set up in 2017. MARN is a network of researchers in the field of ageing in Malaysia. To date, MARN has 86 registered members.

Objectives:

1. Provide a platform to encourage the exchange of information and sharing the expertise of local researchers for the scientific development of the field of ageing;
2. To develop the capacity and role of local researchers to accelerate multidisciplinary collaborative scholarly activities in Malaysia; and
3. Improving the impact and outcomes of overall ageing research in terms of policy inputs and programs at the national, state and local government levels.

2.5.3 Issues and Challenges

- Multidisciplinary focus: Cutting across many different fields and sub-specialization.
- Coordinating/tracking research work funded by different agencies at different levels.
- Sharing of information and data for record and database purposes.
- Access to publicly funded microdata, especially administrative data.
- Strategies are needed to minimize duplication and repetition of studies.

- Sharing and utilization of research results for policy and programme planning at federal, state, and local levels.

2.6 Myanmar

Burmese are struggling with abject poverty and depend on their families for material support in old age. Although the rate of ageing in Myanmar is not as rapid as in other ASEAN countries, it is still crucial to prepare now for the challenges and opportunities ahead.

2.6.1 Research Data

Research on older persons, while increasing in recent years, remains sparse (Knodel, 2017). Empirical evidence indicates that the health status of older persons is relatively poorer in Myanmar than in its regional counterparts.

HelpAge International undertook the 2012 Survey of Older Persons in Myanmar and is commonly referred to as the Myanmar Aging Survey or MAS. It was based on a nationally representative sample of 4,080 persons aged 60 and older except for the exclusion of Kachin state for security reasons (Knodel, 2014). The aim was to provide a comprehensive picture of the situation of older persons in the country including their social characteristics, economic activity and income, material well-being, family support and intergenerational exchanges, and health.

Other extensive research on ageing in Myanmar has occurred during the past couple of years, for example:

No.	Title	Investigator(s)
1.	Ageing Transition in Myanmar	Daw Khing Khing Soe Daw Sandar Myint Daw Khin Myo Khine Daw Aye Thein Daw Khin Moe Moe Khing Htwe
2.	Factors Affecting Quality of Life of Older People	Dr. Min Yar Oo
3.	Community-Based Social Protection in the Dry Zone, Myanmar	Jennifer Leehey
4.	Impacts of Migration on Households in the Dry Zone, Myanmar	Bussarawan Teerawichitchainan John Knodel
5.	Options Assessment for Electronic Cash Transfer Delivery, Myanmar	Maham Farhat Thet Aung Lynn
6.	The Ageing of Myanmar's Farmer Population: Implications for Agriculture and Food Security	Sarah Harper Kate A. Hamblin Kenneth Howse George W. Leeson

7.	Study on Accessing Healthcare by the Older Population in Myanmar	S. Irudaya Rajan Sreerupa
8.	Mapping of Myanmar Services for Older People	HelpAge International (Myanmar)
9.	Fibrinogen, albumin and Hb with Frailty Theise 2019	Dr. Saw Myat Thu Han
10.	Polypharmacy and Frailty Dissertation 2019	Dr. Khine Thet Win
11.	Anaemia and Cognitive function, Functional capacity Dissertation 2019	Dr. Win Nandar Thin
12.	Financial Security of Elderly Women from a Life-Course Perception: Evidence from Myanmar	Shagun Gupta Thomas Opdyke

Censuses are another significant data source, albeit they do not specifically target the older person. It has been used by researchers as the basis for information on population ageing. In the post-independence area, the census has been conducted 3 times, in 1973, 1983, and 2014. The last census was conducted by the Ministry of Immigration and Population's Department of Population, and was funded by Western donors, for US\$74 million, and supervised by the United Nations Population Fund. Important data sources not specifically interviewing older persons are the censuses. The 1973 and 1983 censuses have been used by researchers as the basis for information on population ageing (Department of Population and UNFPA, 2012).

In addition to census data, the following datasets are also useful for analyses related to older persons. This is because all of these surveys have household-level data files with at least basic information of all household members including older-aged members.

- Integrated Household Living Conditions Assessment Surveys (IHLCA) (2004–2005 and 2009–2010);
- The 1991 Population Changes and Fertility Survey; and,
- The 1997, 2001, and 2007 Fertility and Reproductive Health Surveys

2.6.2 Research Network

There are limited numbers of researchers specialized in ageing research in Myanmar. Key players are from universities (e.g., the University of Public Health Yangon, Yangon Institute of Economics particularly its Demography Department), government agencies (e.g., the Department of Population, Ministry of Immigration and Population; Department of Social Welfare, Ministry of Social Welfare, Relief and Resettlement; Ministry of Health), and international organizations (e.g., UNFPA, WHO, HelpAge International).

There are infrastructures like daycare centres for the older persons, inclusive self-help groups, and homes for the aged. In addition, there are also elderly clinics and geriatric wards at the general hospital under the Ministry of Health and Sports. Research Institutes like the Department of Medical Research and Medical Universities, Dental, Nursing has produced research papers dealing with the field of ageing.

2.6.3 Issues and Challenges

Critical issues for Myanmar include whether the country would grow old before becoming wealthy enough to offer adequate social security for its elderly population. And also what responsibilities the state, communities, and families should play in meeting the needs of the older persons. Poverty and inequality are widespread in Myanmar at the moment, as demonstrated by differences in material well-being, health, and quality of life among the elderly. While intergenerational assistance is still important for the well-being of family members, especially the older persons, structural changes may make sustaining conventional forms of old-age support difficult. There is also a need to support ageing research in Myanmar from biological, economic, and socio-behavioural perspectives.

There is a scarcity of researchers with expertise in gerontology and geriatrics. Fortunately, experts on the Myanmar populations based outside the country exist.

Datasets and research on the older person are segregated. Access is likewise restricted but permission could be obtained from the organizations that performed or funded surveys.

2.7 Philippines

The elderly population in Philippines is steadily increasing in the past decade. According to Cruz (2019), the challenges of an unprecedented global ageing trend becomes even more acute in less developed economies such as the Philippines, which face this demographic phenomenon with limited resources. Research on ageing in the Philippines and current policies must be enhanced to adequately address the needs of the country's ageing population.

2.7.1 Research Data

The Philippines Statistics Authority (PSA) is the government authority conducting data collection involving the people of the Philippines. Statistical data published by the PSA involving the older population are predominantly focused on population projections, poverty indices, economic deviations, access to social security benefits, and the like. Data of older persons are defined as those over the age of 60.⁴

The PSA has previously issued indexes that represent the situation of older persons, including the following:

- Philippine Statistics Authority, "2010 Census-based Population Projections in

⁴Philippine Statistics Authority, *Facts on Senior Citizens, Result of the 2015 Census of Population: Population Characteristics, 2015*, available at, https://psa.gov.ph/system/files/2015%20Fact%20Sheets%20on%20Senior%20Citizen_pop.pdf?width=950&height=700&iframe=true#:~:text=Senior%20Citizen%20is%20defined%20as,the%20Philippines%3A%202000%20to%202015 (last accessed March 29, 2021).

collaboration with the Inter-Agency Working Group on Population Projections”⁵

- Philippine Statistics Authority, Women, and Men in the Philippines Statistical Handbook (2016)⁶
- Philippines Statistics Authority, “2014 Annual Poverty Indicator Survey”⁷
- Philippine Statistics Authority, Philippines National Demographic and Health Survey 2017⁸

The Longitudinal Study of Ageing and Health in the Philippines (LSAHP)⁹ is the first multi-actor longitudinal study on ageing in the Philippines with information coming from older Filipinos, their caregivers, and adult children. The 2018 baseline data provides comprehensive information on the health, economic status, and overall well-being of a nationally representative sample of older Filipinos aged 60 and older. These data are a valuable resource for the crafting of evidence-based policies and programmes for this sector of the population. LSAHP is funded by the Economic Research Institute for ASEAN and East Asia and implemented by the Demographic Research and Development Foundation, Inc.

Ageing in the Philippines remains a subject that is severely under-theorized in research (Villegas, 2014). Although older Filipinos do appear in the country’s national reports, current empirical studies incorporating older adults appears to be lacking in the Philippines. The majority of research centred on older Filipinos appears to focus on perceptions of ageing, quality of life of older Filipinos, and older adults in the workforce (Bandana & Andel, 2018).

Studies available online are:

No.	Title	Links/Citation
1.	Senior Citizens during COVID-19 Crisis in the Philippines: Enabling Laws, Current Issues, and Shared Efforts (2021)	Cahapay, M. (2021). Senior Citizens during COVID-19 Crisis in the Philippines: Enabling Laws, Current Issues, and Shared Efforts. <i>Research on Ageing and Social Policy</i> , 9(1), 1-25. http://10.4471/rasp.2021.6066

⁵Philippine Statistics Authority, “2010 Census-Based Population Projections in Collaboration with the Inter-Agency Working Group on Population Projections”. <https://www.psa.gov.ph/content/highlights-2010-censusbased-Population-projections>. Accessed March 29, 2021.

⁶ Philippine Statistics Authority, “Women and Men in the Philippines Statistical Handbook (2016)

⁷ Philippine Statistics Authority, “2014 APIS: Annual Poverty Indicators Survey, 2014, <https://psa.gov.ph/sites/default/files/2014%20APIS%20Final%20Report.pdf>

⁸ Philippine Statistics Authority, Philippine National Demographic and Health Survey 2017, <https://psa.gov.ph/national-demographic-health-survey>

⁹Ageing and health in The Philippines. ERIA. (2020, December 28). <https://www.eria.org/publications/ageing-and-health-in-the-philippines/>

2.	Gender Differences in Access to Health Care Among the Elderly: Evidence from Southeast Asia (2021)	ADB, Gender Differences in Access to Health Care Among the Elderly: Evidence from Southeast Asia (2021), https://www.adb.org/sites/default/files/publication/677981/ewp-633-gender-health-care-elderly-southeast-asia.pdf
3.	Inputs of the Commission on Human Rights of the Philippines to the Report to the General Assembly of the United Nations Independent Expert on the Enjoyment of All Human Rights by Older Persons (2020)	Inputs of the Commission on Human Rights of the Philippines to the Report to the General Assembly of the United Nations Independent Expert on the Enjoyment of All Human Rights by Older Persons, 5 June 2020, https://www.ohchr.org/Documents/Issues/OlderPersons/Submissions/COVID-19/Commission-on-Human-Rights-Philippines.docx .
4.	Older Filipino Women among the Most likely to Suffer from COVID-19 (2020)	UN Women, Older Filipino Women among the most likely to suffer from COVID19, July 7, 2020, available at https://asiapacific.unwomen.org/en/news-and-events/stories/2020/07/older-filipino-women-among-the-most-likely-to-suffer-from-covid-19
5.	Ageing and Health in the Philippines (2019)	Cruz, Cruz and Saito, Ageing and Health in the Philippines (2019), available at https://www.eria.org/uploads/media/Books/2019-Dec-ERIA-Ageing-And-Health-In-The-Philippines.pdf , last accessed February 23, 2021).
6.	Financial Security of Older Women: Philippines (2019)	Sevilla, Financial Security of Older Women: Philippines (2019), available at https://cose.org.ph/wp-content/uploads/2020/12/Financial-Security-of-Older-Women_Perspectives-from-Southeast-Asia.pdf (last accessed Feb 23, 2021).
7.	Silver linings for the Elderly in the Philippines: Policies and Programs for	Reyes, C., Arboneda, A., & Asis, R. (2019, September). Silver Linings for the Elderly

	Senior Citizens (2019)	in the Philippines: Policies and Programs for Senior Citizens. Philippine Institute for Development Studies. https://www.econstor.eu/bitstream/10419/211083/1/1678591343.pdf
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The Commission on Human Rights of the Philippines

2.7.2 Research Network

The main universities in the Philippines house research institutions that study a variety of topics. However, the University of the Philippines Manila is currently the only major institution where there is an established centre specifically for ageing research, namely Institute on Aging. The institute was established under the National Institutes of Health that was previously approved in 1996. And with it, the Gerontology and Disabilities Programs Cluster, through the Committee on Aging and Degenerative Diseases (COMADD). Various physicians, academicians, and allied medical professionals within the University of the Philippines system pioneered the COMADD.

The Board of Regents of the University approved the establishment of the Institute on Aging (IA) in 2012.

The Institute on Aging is a member of the International Association of Gerontology and Geriatrics-Global Ageing Research Network (IAGG-GARN). The goals of the Institute include the conduct of research in the following Key Areas of Research and Development: longitudinal, multi-disciplinary, and evidence-based research is recommended (NAST Monograph on Maximizing QOL of Older Persons thru Better Health 2005). Research dissemination and knowledge translation are also key goals.

2.7.3 Issues and Challenges

The Commission on Human Rights of the Philippines has underlined challenges and concerns faced by older persons, particularly older women as their inputs on the human rights of older women on 30 April 2021. The challenges are:

1. Older persons in the Philippines have historically relied on their children for support in their old age, including financial support, especially for health expenses. Intergenerational transfers from adult children to their older parents have rather fallen over time in the Philippines as children have found it less necessary to provide such support and older persons have lowered their expectations in receiving such. This decline in intergenerational support may affect older women more than older men as while men are likely to rely on their spouses

for support, older women are more reliant on their children as their primary caregivers when they are encountering health problems.¹⁰

2. According to a report of the Economic Research Institute for ASEAN and East Asia (ERIA) and the Demographic Research and Development Foundation, Inc. on Ageing and Health in the Philippines, the decrease of intergenerational support yields mixed disadvantages for women and men. Disadvantages of women include poorer dental hygiene, greater rates of depression, and a higher rate of self-reported pain. In the case of men, there are high rates of smoking which result in higher rates of morbidity. There also appears to be no substantial gender differences in relation to disability.¹¹
3. With respect to the involvement of older persons in the care of their grandchildren, women are reported to be more involved as compared to men, although men are not so far behind.¹²
4. With respect to assets, income, and liabilities, significantly more men than women reported earnings from their work, farm, and property and real estate rentals. More women than men are likely to derive income from family businesses. There is no significant difference by sex with regard to pension as a source of income. However, data shows that because wives are more likely to survive than their husbands, of whom they are beneficiaries, more widows receive pension than widowers.¹³
5. With respect to activities, social isolation, and information technology in the Philippines, older women are experiencing higher levels of loneliness despite having a stronger social network which may be due to unmet psychological needs, whereas older men are using their social relationships to alleviate loneliness; more women than men are also unsatisfied with their lives.¹⁴

2.8 Singapore

Singapore is currently facing an increasingly ageing population, caused by increased life expectancy coupled with decreasing birth rates. By 2035, Singapore is projected with the largest share of older population above 65 years among ASEAN countries at 25.9%. This demographic shift places pressure on Singaporean society as a shrinking workforce struggles to support an ageing population. But Singaporeans are also living longer and remaining healthier for longer.

¹⁰ Ageing and Health in the Philippines (2019), <https://www.eria.org/uploads/media/Books/2019-Dec-ERIA-Ageing-And-Health-In-The-Philippines.pdf>

ADB, Gender Differences in Access to Health Care Among the Elderly: Evidence from SouthEast Asia (2021), <https://www.adb.org/sites/default/files/publication/677981/ewp-633-gender-health-care-elderly-southeast-asia.pdf>

¹¹ Cruz, Cruz and Saito, Ageing and Health in the Philippines (2019), available at <https://www.eria.org/uploads/media/Books/2019-Dec-ERIA-Ageing-And-Health-In-The-Philippines.pdf>, last accessed February 23, 2021).

¹² Id. pg. 41

¹³ Id. pg. 108

¹⁴ Id. pg. 169

2.8.1 Research Data

In Singapore, the issue of an ageing population has been on the national agenda with several high-level committees formed to study ageing trends. Past, current and planned research on ageing in Singapore are listed below:

No.	Year	Research	Findings/ Focus
Evidence for Policy Making			
1.	2009	National survey on informal caregivers (75+)	<ul style="list-style-type: none"> – Evidence for Caregiver support scheme – Caregiver allowance – Encourage flexible work
2.	2009	Panel on Health and Ageing of Singaporean Elderly (PHASE) <ul style="list-style-type: none"> – First national longitudinal study of older adults (60+) – 2009, 2011, 2015 	<ul style="list-style-type: none"> – Disability transitions: Calculate healthy life expectancy estimates (active life expectancy, effect of loneliness on health expectancy, effect of visual and hearing impairments on health expectancy) – CareShield: Accounting for education level disability estimates for 60-79 overestimated, for 80+ much higher than predicted. – Health utilization behaviour - linked to MOH health utilization database. Social determinants of health.
Social Engagement, Long-Term Care, Self-Care			
3.	2016	Longitudinal survey on health, work, retirement, intergenerational transfers and lifelong learning	<ul style="list-style-type: none"> – A new cohort of 60+, 2016, 2019 – More educated, more living alone, more never married
4.	2014	AIC study on attitudes, perceptions of long-term care including use of services, information flow	A longitudinal study of 4000+ referrals (60+)
5.	2014	Self-Care for Older Persons (60+)	RCT: 14 Senior Activity Centres → National roll-out
6.	2013	Perception and attitudes towards ageing and seniors survey	50-74 years old individuals
Dementia and Falls			
7.	2017	National Innovation Challenge Grants	– Dementia Friendly Community – Needs assessment, evaluation of dementia care service

			– Falls implementation programme in the community - Tailored, progressive exercise programme
Others			
8.	2018	The Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TraCE)	– First longitudinal survey on caregiving – The TraCE study addresses these gaps in research on family caregivers in Singapore (and largely, elsewhere)
9.	2014	Singapore Life Panel (Singapore Management University)	– 50-70, 10,000 individuals – Focus: Economic aspects of ageing
10.	2008	Singapore Longitudinal Study of Ageing (SLAS)	– A community-based longitudinal epidemiologic study that aims to increase the understanding of ageing and health, and the factors that influence the ageing process. SLAS seeks to identify the cognitive, biomedical, lifestyle and behavioural, as well as psychosocial risk and protective factors that affect the transition from healthy ageing to functional impairment, illness and death.

The National Innovation Challenge (NIC) on Active and Confident Ageing was established in August 2015 as part of the Action Plan for Successful Ageing. Up to SGD200 million set aside for this NIC, which seeks to catalyse innovative ideas and research in Singapore that can transform the experience of ageing in Singapore, tomorrow. Some of the examples of awarded projects in phase 1A with real-world applications are; grant call on cognition, ageless workplaces innovation grant, and enabling innovation grant.

Key research thrusts of the NIC on ageing:

- i. Lengthening Health Span
 - To find better ways of delaying the onset of disease and disability, and extend seniors' "health span" so that they can continue to lead economically and socially active lives for much longer.
- ii. Productive Longevity
 - To facilitate research and innovation that can unlock the talent, energies and productivity in longevity, to contribute to our labour force and sustain our economic vitality.

- iii. Ageing-in-Place
 - To facilitate research in science and technology to help seniors live independent and autonomous lives despite physical frailty, and to reduce the labour and cost of care provision.

Approach to NIC on ageing grants:

Type of Research	<ul style="list-style-type: none"> – Multi-disciplinary, translational ideas, with a strong preference for solutions that are scalable sector / nation-wide – Breakaway from upstream research that focuses on a single domain (e.g. basic science research) – To enable translation, project teams are expected to partner with an implementation partner for test-bedding from the onset
Thematic Grants and Challenge Statements	<ul style="list-style-type: none"> – Thematic challenge statement with clear targets aligned with the key aspirational goals

2.8.2 Research Network

Many ageing research institutions have been founded in Singapore, including:

- i. Centre for Ageing Research and Education (CARE)
 - Main institution: Duke-NUS Medical School
 - Objectives of institution/research focus: To develop, coordinate, and implement multi-disciplinary evidence-based research and education initiatives in ageing and health. Its research is focused on the social aspects of ageing.
 - Conducts research that facilitates the development of policies, programmes, services and products for an ageing population, and organise knowledge.
- ii. Centre for Research on the Economics of Ageing (CREA)
 - Main institution: Singapore Management University (SMU)
 - Objectives of institution/research focus: To conduct research on the economics of ageing, to contribute to a better understanding of the issues in Singapore and other ageing economies in Asia. Its primary mission is to carry out a programme of research on economic security for Singapore's ageing population.
 - Fosters collaboration with public and private sector agencies to translate research findings into innovations.
- iii. Geriatric Education and Research Institute (GERI)
 - Co-located with Yishun Community Hospital (YCH)

- Objectives of institution/research focus: To conduct research and education on age-related health issues to promote healthy ageing. It aims to address gaps in acute, community and long-term care spaces through clinical and translational research.
 - Topics of research include seniors care delivery and health outcomes, health services and policy research and geriatric education development platforms for key stakeholders in research, policy and practice.
- iv. Centre for Healthy Ageing
- Main institution: National University Health System (NUHS)
 - Objectives of institution: To delay ageing and increase human health span, prolonging disease-free life and maintaining functionality through research in the biology of ageing, development and validation of interventions and novel implementation strategies to extend the healthy lives of Singaporeans.
 - Integrates research and clinical care to provide a holistic strategy to promote healthy living, the focus is on delaying ageing, prolonging disease-free lifespan and maintaining high functionality and resilience.
- v. Institute of Geriatrics and Active Ageing (IGA)
- Main institution: Tan Tock Seng Hospital (TTSH)
 - Objectives of institution: To enable the delivery of holistic care, person-centric health, independence, safety and quality of life of seniors.
 - Conducts interdisciplinary research that spans clinical, behavioural, health services, clinical innovations, healthcare technology assessments, collaborations in basic sciences, aiming to improve geriatric clinical care.
- vi. Joint NTU-UBC Research Centre of Excellence in Active Living for the Elderly (LILY)
- Main institution: Nanyang Technological University (NTU)
 - Objectives of institution/research focus: To develop technology that will empower the elderly to lead an active, independent and dignified lifestyle.
 - The incubator of inter-disciplinary research ideas, designs and builds technology-enabled age-friendly communities.
- vii. Centre for Ageing Research in the Environment (CARE)
- Main institution: National University of Singapore (NUS)
 - Objectives of institution/research focus: Theoretical and applied research in a broad range of knowledge domains related to the environment, including human-centred experience design, community participation and real estate finance.

The following is a list of key ageing research centres/institutions in Singapore:

No.	Center/Institute	Home institution or university	Broad ageing research focus
1	Ageing Research Institute for Society and Education (ARISE)	Nanyang Technological University	Psychosocial; Technology
2	Centre for Ageing Research and Education (CARE)	Duke-NUS Medical School, National University of Singapore	Psychosocial; Clinical; Care integration; Caregiving; Policy and program evaluation
3	Centre for Ageing Research on the Environment (CARE)	National University of Singapore	Built and natural physical environment
4	Centre for Healthy Longevity (CHL)	National University of Singapore	Biology
5	Institute of Geriatrics and Active Aging (IGA)	Tan Tock Seng Hospital	Clinical
6	Centre for Research on Successful Ageing (ROSA)	Singapore Management University	Well-being; Successful ageing; Economics
7	Geriatric Education and Research Institute (GERI)	Khoo Teck Puat Hospital	Clinical; Care integration; Psychosocial
8	Lien Centre for Palliative Care (LCPC)	Duke-NUS Medical School, National University of Singapore	End of life care
9	LILY: Joint NTU-UBC Research Centre of Excellence in Active Living for the Elderly	Nanyang Technological University	Technology; Artificial intelligence
10	Next Age Institute (NAI)	National University of Singapore	Psychosocial; Caregiving; Economics
11	Proposed Centre for Productive Longevity	National University of Singapore	Productive Longevity

2.9 Thailand

Thailand is considered one of the world's rapidly ageing societies. The Thai population will become super-aged, changing from rank 10th in 2015 to 6th in 2035 among all Asia countries (United Nations, 2017). However, there is a tendency toward expansion of morbidity and a higher prevalence of disability as life expectancy increases (Prachuabmoh, et al., 2011; Pothisiri, et al., 2016).

2.9.1 Research Data

According to Narit Nimsomboon's (2019) review on ageing documents, health was the focus of about 61% (Figure 3) of ageing research in Thailand.

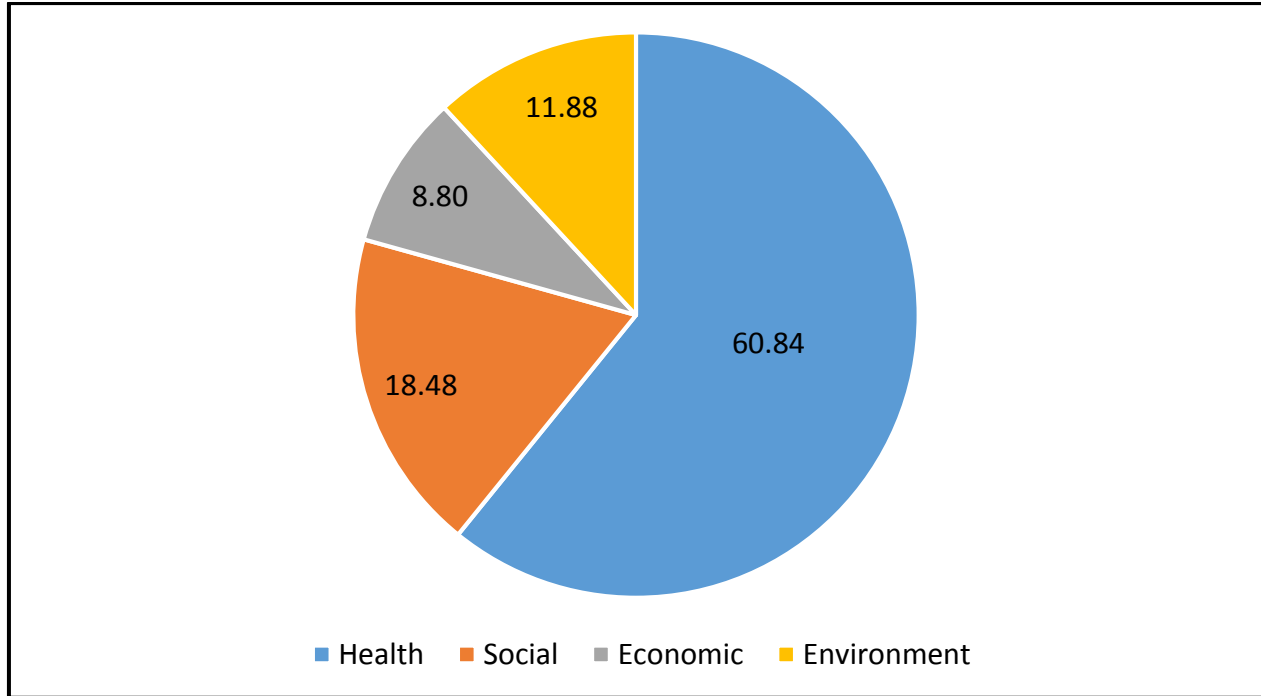


Figure 3: Ageing research dimension in Thailand, 2008 – 2018

Since 2019, the Center for Aging Society Research, National Institute of Development Administration (NIDA) has conducted the Health, Aging, and Retirement or HART project in Thailand. The project was funded by the National Research Commission of Thailand. It can be claimed as the first panel and longitudinal survey on ageing in Thailand. The panel of 5,600 representative households were sampled from the national households in 13 provinces from 5 regions and Bangkok and vicinity. One member aged from 45 years old from each household sample is interviewed face to face. HART is a multidisciplinary survey on the health, employment, socioeconomic status, and social and financial supports within family networks. Each survey wave is conducted every 2 years. The data archive is maintained by the Intelligence and Information Center (IIC), NIDA (http://iic.nida.ac.th/main/?page_id=564). It is open for academic users from the website of the Center for Aging Society Research (CASR), NIDA (<http://rc-demo.nida.ac.th/casr/>). Useful information on the ageing society and HART study is also available on the Facebook of the Center for Aging Society Research (CASR) at <https://www.facebook.com/HART.Thailand/>.

Other regular data and research on ageing in Thailand are:

No.	Survey Project	Organization	Year
1.	Population and Housing Census (C)	National Statistics Office (NSO)	1960, 1970, 1980, 1990, 2000, 2010, 2020 (Every 10 years) (data base available for public)
2.	National Surveys of Older Persons in Thailand (SOPT)	National Statistics Office (NSO)	1994, 2002, 2007, 2011, 2014, 2017 (Every 3 years) (data base available for public)
3.	Survey of Health Status of Older People in Four Regions of Thailand 2006 (Four region study)	Institute of Gerontology, Medical Department, Ministry of Public Health	2006
4.	Survey of Risk Factors for Older Thais 2006 (Elderly risk study)	School of Social Development and Environmental Management, NIDA in collaboration with Ministry of Social Development and Human Security	2006

Teerawichitchainan and Knodel (2015) documented the existence of data related to ageing issues in Thailand using a systematic review approach:

Data Mapping on Ageing in Thailand (up to 2015)																							
Basic Characteristics			Employment and income				Health								Support for the Elderly				Other				
Demographic	Cultural	Education	Economic activity	Reasons for not working	Source of Income	Amount of Income	Self-assessed health	Recent illness/injury	Sensory impairment	Disability	Cognitive difficulty	Psychological wellbeing	Biomarkers	Health behaviours	Access to health insurance	Health care utilization	Personal care	Social support	Number of children	Location of children	Migration history	Contribution to HH	Social participation
C	C	C	C	A2	C	C	A1	A1	C	C	A1		A1	A1	A1	A1	A1	A1	C	C	C	A1	A1
A1	A1	A1	A1		A1	A1	A2	A2	A1	A1	A2	A2		A2	A2	A2	A2	A2	A1	A1	A2	A2	A2
A2	A2	A2	A2		A2	A2	A3	A3	A2	A2	A4	A3		A3	A4	A3	A3		A2	A2		A3	A3
A3	A3	A3	A3		A4	A3		A4	A3	A3		A4		A4			A4					A4	A4
A4	A4	A4	A4			A4			A4	A4													

Notes: C denotes Census, A denotes ageing surveys

A1 (SOPT), A2 (HART), A3 (Four region study), and A4 (Elderly risks study)

2.9.2 Research Network

In Thailand, the Department of Older Persons under the Ministry of Social Development and Human Security serves as the national main agency in coordination and enhancement of actions on the older persons both in policy and practice.

Past and present research on ageing in Thailand are mostly related to health and were conducted by nursing or medical personnel. Research funding sources are mostly from the government annual budget via funding agencies (TGRI, TSRI, THPF). Researchers are mostly from teaching members in the educational institutions/universities

2.9.3 Issues and Challenges

As population ageing is directly related to issues of physical deterioration, the foremost challenge facing Thailand is that of providing adequate elderly healthcare. Older Thais are at higher risk of morbidity and a higher prevalence of disability as life expectancy increases (Prachuabmoh, et al., 2011; Pothisiri, et al., 2016).

Other important ageing concerns that might be researched in the next 5 to 10 years include:

- Re-conceptualization on 'older persons' based on human rights of older persons
 - Law and regulation reform to protect human rights of older persons from discrimination on age, abuse, violence, etc.
 - Public education
- Health care – integrated health care system:
 - Intermediate/long-term care, family- and/or community-base
 - Decentralization of the care services to the local authorities and private sector/NGOs/NPOs/SEs
 - Human resource development in the health care sector: core competency, career path, etc.
- Social security system:
 - Employment/reemployment system for older adults
 - Social insurance system
 - Health insurance system
 - Social welfare programs, and
 - Aged friendly environment
- Disaggregated data: cross-section/panel
 - Longitudinal panel data to support life-course study under a longevity society

2.10 Vietnam

Viet Nam is one of the fastest ageing countries in ASEAN. In 2020, about 8% of the total population was 65 years and above. In 2050, the percentage of older persons 65 years and above is forecasted to reach 20%. There were only a few researches that been conducted in Vietnam and mostly focused on health.

2.10.1 Research Data

Among studies that have been conducted are as follows:

- i. Longitudinal Studies of Ageing and Health in Viet Nam (LSAVH)¹⁵
 - The study was conducted in 2018 and was the very first multi-actor longitudinal study in Viet Nam. Information was collected from older Vietnamese people, current and potential caregivers, and adult children. LSAHV was implemented by the Viet Nam Institute of Population, Health and Development and funded by the Economic Research Institute for ASEAN and East Asia.
 - LSAHV's objectives were 1) to investigate the health status and well-being of Vietnamese people aged 60 years and above, and 2) to assess the determinants of health status and transitions in health status and overall well-being. A total of 6,050 older persons had participated in the study and the outcome provides the baseline data including physical, mental and social health indicators that are useful for the healthcare and social support for the elderly in Vietnam.
- ii. Vietnam health and ageing study (VHAS) 2018¹⁶
 - This study was conducted by the Vietnam National Institute of Health/ National Institute on Aging to investigate the dynamics in the life course, health transitions of Viet Nam war survivors. VHAS will be analyzed longitudinally to examine late-life health transitions and war-related resiliency.
- iii. Prevalence study of cognitive symptoms of dementia in the elderly in Vietnam¹⁷
 - In Viet Nam, mental health is not recognized as a health priority. Therefore, there are not many studies investigating the magnitude of dementia in Viet Nam, specifically to the high-risk groups. The study was conducted by the Vietnam Public Health Association in 2016 to detect the prevalence of cognitive symptoms and other associated factors in older persons 60 years and above. The study found six strong factors of dementia cognitive symptoms including higher age, female, lower education

¹⁵The Longitudinal Study of Ageing and Health in Viet Nam <https://www.eria.org/publications/ageing-and-health-in-viet-nam>.

¹⁶Korinek et.al. Design and measurement in a study of war exposure, health, and aging: protocol for the Vietnam health and aging study. BMC Public Health (2019), 19:1351

¹⁷Bich et.al. Dementia and associated factors among the elderly in Vietnam: a cross-sectional study. Int J Ment Health Syst (2019). 13:57

status, less participation in physical and social activities, and had a history of stroke. They also found that the proportion of older person with cognitive symptoms is high. They recommend promoting a healthy lifestyle by increasing physical and social activities and the findings can be used in designing the intervention program to prevent dementia.

- iv. Social protection for older people in Vietnam¹⁸
 - This paper highlights the urgent need for Viet Nam to find solutions for social protection services for the aged. This is because Viet Nam is ageing more rapidly than expected. The options are focusing on retirement and social allowance benefits. The analysis was based on the Vietnam Household Living Standard Surveys in 2004 and 2008.

- v. Vietnam Aging Survey (VNAS)¹⁹
 - This is the first-ever survey on older persons in Viet Nam conducted in 2011 by the Vietnam Association of Elderly and Vietnam Women’s Union. 4007 respondents aged 50 years and above participated in this study that investigated socio-economic characteristics, health status, healthcare, and access to healthcare services by older persons, access to legal and legal rights, and the role of older persons in the family and society. The main recommendation is to transform social welfare and health care policies to adapt with changes in older persons’ daily lives.
 - One of the reported findings using the VNAS data was factors that influencing the choices of healthcare among older persons 60 years and above.²⁰

2.10.2 Issues and challenges

Before 2011, most studies on the elderly in Vietnam were conducted on a small scale, focusing on specific groups or locations. The collected national data does not have information that specializes in information on older persons, including economic, health, social and family life. This may or may not be enough to explain the elderly population situation.

Apart from that, the network of researchers in Viet Nam is very limited. Almost all studies in Vietnam were conducted by government agencies, funded by international agencies. In this regard, not much data regarding research on the elderly in Vietnam can be reported.

¹⁸Thanh Long Giang. Social Protections for Older People in Vietnam: Role, Challenges and reform Options. *Malaysian Journal of Economic Studies* (2013). 50(2), 207-219

¹⁹Viet Nam Aging Survey (VNAS), 2011: Key Findings. Technical Report January 2012.

²⁰Tuyet Anh Nguyen, Long Thanh Giang. Factors Influencing the Vietnamese Older Persons in Choosing Healthcare Facilities. *Health Services Insights* (2021). <https://doi.org/10.1177/11786329211017426>

3.0 THE ASEAN RESEARCH AGENDA ON AGEING

The ASEAN Research Agenda on Ageing is summarized in Table 6. Expert consultations at the 2nd Regional Workshop for the Establishment of ASEAN-Wide Research Networking on Ageing in 2019 resulted in the major priorities and the research areas outlined. The research priorities are applicable to all interested parties that conduct research on ageing in the ASEAN region. The agenda stipulated shall be the key focus for ageing research for ASEAN in the next few years, depending on the pace of the demographic changes.

Table 6: The ASEAN Research Agenda on Ageing

The ASEAN Research Agenda on Ageing	Research Agenda on Ageing	
	Major Research Priorities	Research Area
Priority Direction 1: Older Persons and Development	Priority 1: Elderly and Workforce Priority 2: Elderly Care Priority 3: Silver Economy Priority 4: Policy, Law and Social Acceptance	<ol style="list-style-type: none"> 1. Social Security 2. Policy Planning and Development 3. Society for All Ages 4. Elderly and The Economy 5. Old Age Employment and Workforce 6. Elderly Care
Priority Direction 2: Advancing Health and Well-Being Into Old Age	Priority 1: Financing and Health Care Cost Priority 2: Burden and Pattern of Diseases Priority 3: Lifestyle Factors, Prevention (Dietetics, Smoking) Priority 4: Social-Behavioral Determinants of Health Priority 5: Healthcare System, Database and Manpower	<ol style="list-style-type: none"> 1. Financial Sustainability 2. Manpower Development for Aged Care 3. Support for Long Term Care 4. Support for Persons with Dementia 5. Social Determinants of Health 6. Legislation Reform

<p>Priority Direction 3: Ensuring Enabling and Supportive Environments</p>	<p>Priority 1: Caregiving/Long Term Care Services Priority 2: Accessibility Priority 3: Family Support Priority 4: Social Engagement</p>	<ol style="list-style-type: none"> 1. Type of Care Needs 2. Mapping of Physical Facility for Older Persons 3. Minimum Income Standard (MIS) 4. Younger Generation on Awareness of Older People's Needs 5. Research on Elderly's Loneliness 6. Social Impact Analysis on Elderly' Local Knowledge
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4.0 ASEAN-WIDE RESEARCH NETWORKING ON AGEING

The research network is significant for ASEAN Member States, which have fragmented scholars and limited funding. It enables shared learning and maximizes the efficient use of resources. Harmonization of ageing surveys and collaboration on cross-national ageing research in ASEAN might potentially be accomplished through the network.

In establishing the ASEAN-Wide Research Networking on Ageing, each participating Country Director prepared a list of experts and researchers pertaining to ageing in their respective countries. The participating member state was also required to conduct a series of in-country capacity building sessions for their local researchers to increase their awareness and knowledge on ageing research. During these sessions, the participants were exposed to the best practices in research methods, clinical research, survey research, secondary data and administrative record analysis as well as evaluative research.

The experts and researchers in the field of ageing in the region are also drawn from the following list of participants:

- i. The Regional Workshops for the Establishment of ASEAN-Wide Research Networking on Ageing
- ii. The Regional Expert Forum on Ageing and Development 2015 (REFAD2015)

List of ASEAN-Wide Research Networking on Ageing is available in Annex 3.

5.0 CONCLUSION

The speed of population ageing worldwide is increasing. Ageing is a process that includes many aspects of life. Thus, there's a great need to study the ageing process and countries must coordinate their research efforts in understanding the ageing issues and could allow the nation to develop policies and programs in addressing the population demographic change.

Recent years have seen an increase in research activities in the field of ageing and older persons. It involves inter- and cross-disciplinary, covering from social, health, environmental and others. Different countries have conducted different aspects of research. This document compiles research activities conducted in ASEAN countries covering the sharing of knowledge, expertise and resources across countries and disciplines. This can assist to foster quality research in an environment with limited resources as well as expand the ongoing research.

Based on the research compilation, three main priorities on ASEAN Research Agenda on Ageing have been drawn out which are 1) older persons and development; 2) advancing health and well-being into old age; and, 3) ensuring enabling and supportive environments.

This document is an effort to share research on ageing, this would advance our knowledge of ageing particularly in ASEAN countries. This could open an opportunity for more research collaborations worldwide. The collaboration could be extended beyond academicians or researchers in multidiscipline. A partnership can be fostered with policy makers, community-based organizations that work for or with older persons. With this approach, the findings could be translated to the real world better and faster.

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ANNEX

Annex 1: Workshop Programme

Programme		Programme	
Day 1 - Wednesday, 2nd October 2019 2nd Regional Workshop: Research on Ageing		Day 2 - Thursday, 3rd October 2019 2nd Regional Workshop: Research on Ageing	
8:30 am - 9:00 am	Arrival and Registration	9:00 am - 10:30 am	Country Paper Presentation 3 - Research on Ageing in Brunei - Research on Ageing in Malaysia - Q&A Session
9:00 am - 9:30 am	Opening Ceremony by YBrs. Dr. Hishamuddin Mohd Hashim, Deputy Secretary General (S), Ministry of Women, Family and Community Development, Malaysia	10:30 am - 11:00 am	Tea Break
9:30 am - 10:00 am	Keynote Address "Comparative Research on Older Persons in Southeast Asia" by Prof. Yosuhiko Saito, Nihon University, Japan	11:00 am - 1:00 pm	Group Discussion on Priority Research Area on Ageing in ASEAN
10:00 am - 10:30 am	Group Photo and Tea Break	1:00 pm - 2:00 pm	Lunch
10:30 am - 1:00 pm	Country Paper Presentation 1 - Research on Ageing in Cambodia - Research on Ageing in Indonesia - Research on Ageing in Lao PDR - Research on Ageing in Myanmar - Q&A Session	2:00 pm - 3:00 pm	Development of Regional Research Framework on Ageing in Southeast Asia: Linking the Research Network on Ageing and ASEAN Ageing Research Consortium by Prof. Yosuhiko Saito, Nihon University, Japan
1:00 pm - 2:00 pm	Lunch	3:00 pm - 4:00 pm	Recommendations for an ASEAN Research Agenda on Ageing by Mr. Abdul Shukur Abdullah, Director General, National Population and Family Development Board and Regional Project Director of ARNA
2:00 pm - 4:30 pm	Country Paper Presentation 2 - Research on Ageing in Philippines - Research on Ageing in Singapore - Research on Ageing in Thailand - Research on Ageing in Viet Nam - Q&A Session	4:00 pm - 4:30 pm	Closing Ceremony by Dato' Dr. Narimah Awin, Chairman, National Population and Family Development Board, Malaysia
4:30 pm - 5:00 pm	Tea Break End of Day 1	4:30 pm - 5:00 pm	Tea Break End of Workshop

Annex 2: List of Participants of the 2nd Regional Workshop



Brunei

1. **Researcher:** Dr. Yusnani Mohd Yusof, *Fellow, Centre for Advanced Research (CARE), University Brunei Darussalam.*

Cambodia

2. **Country Director:** Ms. Ly Kimleang, *Deputy Director, Elderly Welfare Department, Ministry of Social Affairs Veteran and Youth Rehabilitation, Phnom Penh, Cambodia.*
3. **Researcher:** Mr. Im Bunchheoun, *Chief of Bureau, Elderly Welfare Department, Ministry of Social Affairs Veteran and Youth Rehabilitation, Phnom Penh, Cambodia.*

Indonesia

4. **Country Director:** Dr. Oetami Dewi, *Director, Research and Development Center for Social Welfare Service, Ministry of Social Affairs of Republic of Indonesia.*

5. **Researcher:** Ms. Ratih Probosiswi, *Head Sub Division for Information and Advocation, Research and Development Center for Social Welfare Service, Ministry of Social Affairs of Republic of Indonesia.*

Laos

6. **Country Director:** Mr. Berthor Tongpaothor, *Director of Eldery Development Division, Lao PDR.*

Malaysia

7. **Country Director:** Prof. Dato' Dr. Tengku Aizan Tengku Hamid, *Director, Malaysian Research Institute on Ageing (MyAgeing), Universiti Putra Malaysia.*
8. **Researcher:** Prof. Dr. Suzana Shahar, *Dean, Faculty of Health Sciences, Universiti Kebangsaan Malaysia.*
9. **Self-Funded 1:** Dr. Linariza Haron, *Senior Lecturer, Construction Management Programme, Faculty of Housing, Building and Planning, Universiti Sains Malaysia.*
10. **Self-Funded 2:** Dr. Arimi Fitri Mat Ludin, *Senior Academic, Center for Healthy Ageing and Wellness (HCARE), Faculty of Health and Sciences, Universiti Kebangsaan Malaysia.*
11. **Self-Funded 3:** Dr. Elangovan Subbiah, *Public Health & Gerontology Specialist (recently retired from KKM).*
12. **Self-Funded 4:** Datin Dr. Zuriati Zakaria, *Honorary Secretary General, National Council of Senior Citizens Organisation of Malaysia (NASCOM).*
13. **Self-Funded 5:** Associate Prof. Dr. Tey Nai Peng, *Department of Applied Statistics, Faculty of Economics and Administration, Universiti Malaya.*
14. **Self-Funded 6:** Associate Prof. Dr. Rohana Jani, *Ungku Aziz Centre for Development Studies, Faculty of Economics and Administration, Universiti Malaya.*

Myanmar

15. **Country Director:** Dr. Kay Thi Kyaw, *Director of Social Welfare (Yangon Region), Ministry of Social Welfare, Relief and Resettlement, Myanmar.*
16. **Researcher:** Ms. Mu Mu Swe, *Assistant Director No. (23), Ministry of Social Welfare, Relief and Resettlement, Myanmar.*

Singapore

17. **Country Director:** Ms. Elaine Thum Huie Yee, *Deputy Director, Successful Ageing/Ageing Planning Office, Ministry of Health, Singapore.*
18. **Researcher:** Prof. Angelique Chan Wei Ming, *Executive Director, Duke NUS Medical School, Centre for Ageing Research and Education, Singapore.*
19. **Self-Funded 1:** Prof. David Bruce Matchar, *Professor, Duke NUS Medical School, Programme in Health Services and Systems Research, Singapore.*

Thailand

20. **Researcher:** Dr. Dararatt Anantanasuwong, *Director, Center for Ageing Society Research, National Institute of Development Administration (NIDA).*

Invited Experts

21. Prof. Yasuhiko Saito, *Professor, Nihon University, Japan.*
22. Dr. Osuke Komazawa, *Special Advisor to the President, Economic Research Institute for ASEAN and East Asia (ERIA), Indonesia.*

Annex 3: List of ASEAN-Wide Research Networking on Ageing

No.	Name	Designation	Organization	Email
Brunei				
1	Dr. Yusnani Mohd Yusof	Fellow	Centre for Advanced Research (CARE), University Brunei Darussalam	myyusnani@gmail.com
Cambodia				
2	Ly Kimleang Country Director	Deputy Director	Elderly Welfare Department, Ministry of Social Affairs Veteran and Youth Rehabilitation, Phnom Penh	lykimleang.mosvy@gmail.com
3	Im Bunchheoun	Chief of Bureau	Elderly Welfare Department, Ministry of Social Affairs Veteran and Youth Rehabilitation, Phnom Penh	
4	Dr. Poch Bunnak	Deputy Secretary General	General Secretariat for Population and Development, Ministry of Planning, Cambodia	bunnakpoch@gmail.com
Indonesia				
5	Dr. Oetami Dewi Country Director	Director	Research and Development Center for Social Welfare Service, Ministry of Social Affairs of Republic of Indonesia	utamid@yahoo.com
6	Prof. Dr. Aris Ananta	Professor	Faculty of Economics and Business, Universitas Indonesia	arisananta@gmail.com

7	Dr. Evi Nurvidya Arifin	Researcher	Center for Ageing Studies, Universitas Indonesia	enarifin@gmail.com
8	Assoc. Prof. Dr.Nugroho Abikusno	Head (InResAge)	Indonesia Research on Ageing Population Network, Trisakti University Research Institute, Faculty of Medicine, Trisakti University	nabikusno@yahoo.com
9	Ratih Probosiswi	Head Sub Division for Information and Advocation	Research and Development Center for Social Welfare Service, Ministry of Social Affairs of Republic of Indonesia	
10	Prof. Dr.Siti Setiati	President (PERGEMI)	Indonesian Society of Medical Gerontology	s_setiati@yahoo.com
11	Tri Budi Wahyuni RAHARDJO	Director (CAS)	Center for Ageing Studies, Universitas Indonesia	tri.budi.new@gmail.com
Lao People's Democratic Republic				
12	Berthor Tongpaothor Country Director	Director of Older Persons Development Division	Department of Policy for Devotee, Persons with Disability and Older Persons, Ministry of Labour and Social Welfare,	beuthor58@hotmail.co.uk
Malaysia				
13	Dato' Dr. Tengku Aizan Hamid Country Director	Research Fellow	Malaysian Research Institute on Ageing, Universiti Putra Malaysia, Serdang	aizan@upm.edu.my
14	Adzmel Mahmud	Director	National Population and Family Development Board	adzmel@lppkn.gov.my
15	Albert Anthony	Retiree & EXCO	Association for Lifelong Learning of Older Persons U3A	albert.aviator@gmail.com

			Kuala Lumpur and Selangor	
16	Amrizal Muhammad Nur	Associate Profesor	Institute of Ear, Hearing & Research, Kolej Tun Syed Nasir, Universiti Kebangsaan Malaysia	amrizal65@gmail.com
17	Dr. Anjli Panalal Doshi	Deputy Director-General (Policy)	National Population and Family Development Board, Malaysia	
18	Dr. Arimi Fitri Mat Ludin	Senior Lecturer	Center for Healthy Ageing and Wellness (HCARE), Faculty of Health and Sciences, Universiti Kebangsaan Malaysia	arimifitri@ukm.edu.my
19	Assoc. Prof. Dr. Asnor Juraiza Ishak	Associate Profesor	Faculty of Engineering, Universiti Putra Malaysia	asnorji@upm.edu.my
20	Assoc. Prof. Asrenee Ab Razak	Senior Lecturer	School of Medical Sciences, Universiti Sains Malaysia	drasrenee@gmail.com
21	Dr. Azreen Azman	Senior Lecturer	Faculty of Computer Science and Information Technology, Universiti Putra Malaysia	azreenazman@upm.edu.my
22	Assoc. Prof. Azura Che Soh	Associate Profesor	Department of Electrical and Electronic, Faculty of Engineering, Universiti Putra Malaysia	azuracs@upm.edu.my
23	Prof. Dr. Benjamin Chan Yin Fah	Profesor	Faculty of Business and Management, Asia Pacific University of	dr.benjamin_chan@apu.edu.my

			Technology and Innovation	
24	Chai Sen Tyng	Research Officer	Malaysian Research Institute on Ageing, Universiti Putra Malaysia	chai@upm.edu.my
25	Prof. Dr. Chan Yoke Mun	Head	Laboratory of Medical Gerontology, Institute of Gerontology, Universiti Putra Malaysia	cym@upm.edu.my
26	Chin Ai-Vyrn	Consultant Geriatrician	Department of Medicine, Faculty of Medicine, Universiti Malaya	avchin@um.edu.my
27	Assoc. Prof. Ching Siew Mooi	Associate Profesor	Faculty of Medicine and Health Science, Universiti Putra Malaysia	sm_ching@upm.edu.my
28	Chui Yin Wong	Senior Lecturer	Faculty of Creative Multimedia, Multimedia University	chuiyinwong@gmail.com
29	Assoc. Prof. Claire Choo Wan Yuen	Head	University of Malaya Medical Centre	ccwy@ummc.edu.my
30	Devi Peramalah	Research Officer	Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya	devi@ummc.edu.my
31	Assoc. Prof. Dr. Doris Padmini Selvaratnam	Associate Professor	School of Economics, Faculty of Economics and Management, Universiti Kebangsaan Malaysia	pegasus@ukm.edu.my
32	Dr. Ejaz Ahmad Chaudhry	Chief Executive Officer	Noble Care Malaysia	info@mynoblecare.com

33	Dr. Elangovan Subbiah	Public Health and Gerontology Specialist	Perak Health Daprtment, Ministry of Health (Retired)	
34	Dr. Fakhru Zaman Rokhani	Associate Profesor	Department of Computer and Communication Systems, Faculty of Engineering, Universiti Putra Malaysia	fzr@upm.edu.my
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