



January
2024

BASELINE ASSESSMENT REPORT

AGE-FRIENDLY CITY IPOH





AGE –FRIENDLY CITY IPOH: BASELINE ASSESSMENT REPORT



FIRST EDITION

AGE –FRIENDLY CITY IPOH: BASELINE ASSESSMENT REPORT

Copyright © Institute for Clinical Research, National Institutes of Health, Ministry of Health Malaysia, Selangor, Malaysia.

e ISBN: 978-629-98904-0-9

First published in 2024

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means either electronic, mechanical, photocopying, recording and/ or otherwise without prior written permission from the publisher. Application for such permission should be addressed to the:

Institute for Clinical Research, National Institutes of Health
1, Jalan Setia Murni U13/52, Section U13, Setia Alam,
40170 Shah Alam, Selangor, MALAYSIA.
Tel : +603-3362 8403/ 8316
Fax : +603-3362 8001
Website : www.nih.gov.my

Suggested citation: Age-friendly City Ipoh: Baseline Assessment Report (2024). Institute for Clinical Research, National Institutes of Health, Ministry of Health Malaysia.

Disclaimer: The views, interpretations, implications, conclusions and recommendations expressed in this report are those of the survey participants' and do not necessarily represent the opinions of the investigators participating in the project nor the views of policy of the Ministry of Health Malaysia.

Funding: This study was funded by a grant from National Institutes of Health, Ministry of Health Malaysia

NMRR Approval: NMRR-19-3191-51748 (IIR)

Table of content

Contents

FOREWORD BY DIRECTOR GENERAL OF HEALTH	5
FOREWORD BY DEPUTY DIRECTOR GENERAL OF HEALTH	6
FOREWORD BY DIRECTOR OF THE INSTITUTE OF CLINICAL RESEARCH	7
FOREWORD BY DIRECTOR OF THE PERAK STATE HEALTH DEPARTMENT	8
FOREWORD BY CHIEF MINISTER OF PERAK STATE	9
FOREWORD BY SECRETARY OF STATE OF PERAK.....	10
FOREWORD BY MAYOR OF IPOH CITY	11
IPOH AGE-FRIENDLY CITY RESEARCH PROJECT TEAM	12
EXECUTIVE SUMMARY	13
CHAPTER 1: INTRODUCTION TO IPOH CITY	14
1.1. Geographical and physical characteristics.....	14
1.2. History	14
1.3. City structure: Districts.....	16
1.4. Demographics and population	17
1.5. Population by ethnic group of Ipoh city Council Authority Area.....	18
1.6. Socio-economics characteristics.....	19
1.6.1. Household expenditure.....	19
1.7. Employment status	20
CHAPTER 2: INTRODUCTION OF AGE-FRIENDLY RESEARCH.....	21
CHAPTER 3: METHODOLOGY	23
3.1. Overview of the study	23
3.2. Quantitative phase.....	23
3.2.1. Sample size and sampling method	23
3.2.2. Sampling technique.....	24
3.2.3. Survey	25
3.2.4. Instrumentation	25
3.2.5. Data analysis.....	30
3.3. Qualitative phase.....	31
3.3.1. Rationale of qualitative study.....	31
3.3.2. Objectives of qualitative study	31
3.3.3. Study design and setting	31

3.3.4.	Study population	32
3.3.5.	Sampling method	32
3.3.6.	Data collection	33
3.3.7.	Data analysis	33
CHAPTER 4: DOMAIN 1 - OUTDOOR SPACES AND BUILDINGS		35
4.1.	Usage of outdoor spaces.....	35
4.2.	Accessibility of outdoor spaces and buildings.....	35
4.3.	Perceived importance of the outdoor spaces and buildings.....	36
4.4.	Gap score analysis for outdoor spaces and buildings domain	37
4.5.	Qualitative results	38
4.5.1.	Theme I: Parks	38
4.5.2.	Theme II: Public buildings and Facilities	39
4.5.3.	Theme III: Services	40
4.5.4.	Theme IV: Security	41
CHAPTER 5: DOMAIN 2 - TRANSPORTATION		43
5.1.	Modes of transportation used by respondents	43
5.2.	Accessibility of transportation	43
5.3.	Perceived importance of the transportation	44
5.4.	Gap score analysis for transportation domain.....	45
5.5.	Qualitative results	45
5.5.1.	Theme I: Experience using public transportation	46
5.5.2.	Theme II: Experience towards road infrastructure	46
5.5.3.	Theme III: Improvement of public transport	47
CHAPTER 6: DOMAIN 3 – HOUSING		49
6.1.	Needs of older adults for house modifications and renovations.....	49
6.2.	Accessibility of housing features.....	50
6.3.	Perceived importance of the housing features.....	50
6.4.	Gap score analysis for housing domain.....	51
6.5.	Qualitative results	52
6.5.1.	Theme I: House modification	52
6.5.2.	Theme II: House features	53
6.5.3.	Theme III: Financial constraint	54
6.5.4.	Theme IV: House safety	55
CHAPTER 7: DOMAIN 4 – SOCIAL PARTICIPATION, INCLUSION AND EDUCATIONAL OPPORTUNITIES		56

7.1.	Educational activities participated by older adults.....	56
7.2.	Availability of social opportunities	56
7.3.	Perceived importance of social inclusion	57
7.4.	Gap score analysis for social participation, inclusion, and educational opportunities domain	58
7.5.	Qualitative results	59
7.5.1.	Theme I: Social engagement	59
7.5.2.	Theme II: Religious, cultural and spiritual activities	60
7.5.3.	Theme III: Infrastructure, transportation and funding	61
7.5.4.	Theme IV: Social interaction	62
7.5.5.	Theme V: Community services	63
7.5.6.	Theme VI: Entertainment	63
CHAPTER 8: DOMAIN 5 - VOLUNTEERING AND CIVIC ENGAGEMENT		65
8.1.	Availability of volunteer and civic engagement opportunities	65
8.2.	Perceived importance of volunteer and civic engagement opportunities	65
8.3.	Gap score analysis for volunteer and civic engagement domain	66
8.4.	Qualitative results	66
8.4.1.	Theme I: Voluntary services	67
CHAPTER 9: DOMAIN 6 – CIVIC PARTICIPATION AND EMPLOYMENT		68
9.1.	Employment status, sources of income and intention to work	68
9.2.	Availability of civic participation and employment	68
9.3.	Perceived importance of civic participation and employment opportunities	69
9.4.	Gap score analysis for civic participation and employment domain	69
9.5.	Qualitative results	70
9.5.1.	Theme I: Job characteristics	70
9.5.2.	Theme II: Part-time job opportunities	71
9.5.3.	Theme III: Retirement plan	72
CHAPTER 10: DOMAIN 7 - COMMUNICATION AND INFORMATION		73
10.1.	Internet access and mode of interaction	73
10.2.	Availability of community information	74
10.3.	Perceived importance of communication and information	74
10.4.	Gap score analysis for communication and information domain.....	75
10.5.	Qualitative results	76
10.5.1.	Theme I: Methods of communication	76
10.5.2.	Theme II: Source of information	77

10.5.3.	Theme III: Positive attitudes toward the Internet	78
10.5.4.	Theme IV: Barriers to going online	79
10.5.5.	Theme V: Digital infrastructure	81
10.5.6.	Theme VI: Skill training and support	82
CHAPTER 11: DOMAIN 8 – COMMUNITY SUPPORT AND HEALTH SERVICES		83
11.1.	Health condition of respondents	83
11.2.	Healthcare coverage among respondents	83
11.3.	Availability of community support and health services	84
11.4.	Perceived importance of community support and health services	85
11.5.	Gap score analysis for community support and health services	86
11.6.	Qualitative results	86
11.6.1.	Theme I: Waiting time	87
11.6.2.	Theme II: Healthcare personnel	87
11.6.3.	Theme III: Healthcare infrastructure	87
11.6.4.	Theme IV: Healthcare services	88
References		89
Appendix		91

FOREWORD BY DIRECTOR GENERAL OF HEALTH



It is with profound enthusiasm that I introduce this report, a testament to the resolute commitment we have embraced in the wake of the 12th Malaysian Plan's Health Research Priority. Rooted in the firm belief that our older population deserves unwavering attention, this document showcases the culmination of our endeavours to create an age-friendly and supportive society.

As the pages unfold, they reveal the unfolding story of how the 12th Malaysian Plan's Health Research Priority, particularly within the realm of older people, has catalysed an evolution in our approach. In a world where aging populations are becoming the norm, Malaysia stands poised to be a beacon of proactive adaptation and compassionate care.

"The visionary National Policy for Older Persons (2011) serves as a compass guiding us toward a society that not only respects its senior members but also empowers them to remain active contributors to our nation's development."

The report resonates with the echoes of our elderly citizens' voices. Defined as those over 60, they constitute a vibrant segment of our society, with their numbers steadily growing. Within this context, the plan's emphasis on the well-being of older individuals is both timely and essential.

The visionary National Policy for Older Persons (2011) serves as a compass guiding us toward a society that not only respects its senior members but also empowers them to remain active contributors to our nation's development.

The heartbeat of this report pulses in the research project it unveils – an initiative inspired by the very priorities outlined in the 12th Malaysian Plan. This endeavour, aimed at addressing the critical health and well-being needs of our older citizens, serves as a testament to our commitment to their welfare.

As the tides of demographic change reshape our nation, this report underscores our unwavering dedication to fostering an age-friendly society. It is my hope that these words inspire not just reading, but action; not just understanding, but a commitment to upholding the dignity, respect, and quality of life for our elderly citizens.

With gratitude for the collective effort that birthed this report.

Datuk Dr. Muhammad Radzi Abu Hassan
Director General of Health
Ministry of Health, MALAYSIA

FOREWORD BY DEPUTY DIRECTOR GENERAL OF HEALTH



Welcome to a journey that exemplifies the heart of Ipoh City's dedication to inclusivity and well-being.

The landscape of our society is shifting, urging us to prioritize the needs of our elderly citizens. This report serves as a beacon of the commitment Ipoh City has made to an age-friendly future, aligning with the Health Research Priority for Older Adults outlined in the 12th Malaysian Plan. Within these pages, you'll witness our efforts to enhance the quality of life for our senior residents, enabling them to thrive in an environment that values their wisdom and contributions.

Central to our journey is Ipoh City's integration into the Global Network for Age-Friendly Cities and Communities. This isn't merely a symbolic gesture; it's a profound step towards creating an environment that caters to the unique needs of our elderly population.

This report takes you through the Age-friendly Research City Project, where the focus was on identifying gaps and unmet needs among our elderly residents. Housing, transportation, health services, and other domains were scrutinized. The insights we gained serve as a roadmap to shape policies and practices that reflect our commitment to an age-friendly city.

"This isn't merely a symbolic gesture; it's a profound step towards creating an environment that caters to the unique needs of our elderly population."

The creation of this report was a collaborative endeavour, involving stakeholders, healthcare experts, researchers, and the community. Their dedication and passion are tangible within these pages. This report is more than a compilation of findings; it's a testament to our belief in a city that cares for its elderly and enables them to live fulfilling lives.

I extend my deepest appreciation to all who have contributed to this report. As you immerse yourself in its contents, may you find inspiration to stand with us as advocates for an age-friendly society that places the health and well-being of our elderly at its core.

Datuk Dr. Nor Fariza Ngah
Deputy Director General of Health (Research and Technical Support)
Ministry of Health, MALAYSIA

FOREWORD BY DIRECTOR OF THE INSTITUTE OF CLINICAL RESEARCH



This report takes you through the Age-friendly Research City Project, where the focus was on identifying gaps and unmet needs among our elderly residents.

Recognizing the complexity of understanding the multifaceted needs of our elderly, this research was thoughtfully designed using a mixed-method approach. By integrating both quantitative and qualitative aspects, we were able to achieve a holistic understanding that goes beyond numbers. This approach not only complements the statistical findings but also captures the nuanced experiences and voices of Ipoh City's elderly through interviews, as well as relevant caregivers and healthcare providers.

"This research was thoughtfully designed using a mixed-method approach. By integrating both quantitative and qualitative aspects, we were able to achieve a holistic understanding that goes beyond numbers."

Moreover, the outcomes derived from the research project underwent meticulous translation into comprehensive presentations at various esteemed workshops and conferences. Significantly, the synthesis of these findings culminated in the publication of two scholarly articles within well-regarded journals, thereby substantiating the broader diffusion of our enlightening insights. Equally vital, the imperative key findings were effectively communicated to stakeholders through engaged discussions and purposeful meetings, fostering a cooperative methodology that substantiates the refinement of our age-friendly initiatives.

I extend my heartfelt appreciation to all who have played a pivotal role in the creation of this report. Your dedication and commitment to a comprehensive research methodology underscore the significance of aligning with the Health Research Priority for Older Adults. As you delve into the contents of this report, may you be inspired by the evidence of a well-designed research approach that reinforces our commitment to fostering an age-friendly society. Together, let us advocate for an environment that prioritizes the health and well-being of our elderly, ensuring a robust foundation for the initiatives that lie ahead.

Datin Dr. Sheamini A/P Sivasampu
Director of the Institute of Clinical Research (ICR),
National Institute of Health (NIH),
Ministry of Health, MALAYSIA

FOREWORD BY DIRECTOR OF THE PERAK STATE HEALTH DEPARTMENT



"It's a place where structures and services are thoughtfully designed to be inclusive and accessible, catering to the diverse needs and capacities of older residents."

Perak Sejahtera 2030.

In 2002, the World Health Organization (WHO) introduced a groundbreaking Policy Framework on Active Ageing, setting the stage for global cities to embrace the concept of age-friendliness. An age-friendly city is one that fosters active ageing by creating an environment rich in opportunities for health, participation, and security, thereby enhancing the quality of life as individuals advance in years. It's a place where structures and services are thoughtfully designed to be inclusive and accessible, catering to the diverse needs and capacities of older residents.

In December 2019, Ipoh City proudly earned its place as a member of the WHO Network of Age-Friendly Cities and Communities. This milestone ignited the Ipoh Age-Friendly City research project, which sought to assess the baseline needs and identify gaps for healthy ageing among our elderly population. The study meticulously followed the comprehensive guidelines outlined in the eight domains prescribed by the Global Network of Age-Friendly Cities and Communities.

This report serves as a powerful voice for Ipoh's elderly citizens, illuminating their unique needs and underscoring our society's unwavering commitment to fostering an age-friendly environment through a holistic approach. It reaffirms the city's steadfast dedication to meeting the requirements of its senior residents and promoting active, healthy ageing. Together, we embark on this journey towards a more inclusive and vibrant Ipoh, where every generation thrives.

I extend my heartfelt appreciation to all who have played a pivotal role in the creation of this report.

YBrs. Dr. Sirajuddin bin Hashim
Director of the Perak State Health Department,
State of Perak,
Perak Darul Ridzuan,
Ministry of Health, MALAYSIA

FOREWORD BY CHIEF MINISTER OF PERAK STATE



“Perak boasts the second-largest population among the four states, with a notable increase in the elderly segment from 7.7% to 8.9% between 2010 and 2020 (DOSM).”

Salam Malaysia Madani dan Salam Perak Sejahtera 2030.

Perak Sejahtera 2030, a comprehensive guideline that shapes policies, initiatives, and the principal agenda for Perak from 2022 to 2030. This plan, in harmony with the Perak State Structure Plan and other development strategies, confronts the present and future challenges faced by our beloved state.

Aligned with this vision, the Donut Economy model spotlights equilibrium across economic, social, political as well as governance, and environmental domains, a perfect fit for Perak Sejahtera 2030's holistic goals. It ensures the fulfilment of diverse human needs, encompassing health, public safety, environmental sustainability, infrastructure, elderly care, and more.

Perak boasts the **second-largest population** among the four states, with a notable increase in the elderly segment **from 7.7% to 8.9% between 2010 and 2020** (Source: Department of Statistics Malaysia, 2020). This underscores the paramount importance of healthy ageing, transcending all age groups, particularly the elderly.

My heartiest congratulations to Ipoh City for joining the WHO Network of Age-Friendly Cities and Communities. The initial research project serves as a crucial step, shedding light on issues and challenges faced by our elderly population, offering invaluable insights for future planning, especially within the City and Greater Ipoh. Together, we aim to create a more inclusive, sustainable, and age-friendly community and vibrant yet exciting place for Ipoh and ultimately for the entire State of Perak.

YAB Dato' Seri Saarani Mohamad
The Chief Minister of Perak State,
Perak Darul Ridzuan,
MALAYSIA

FOREWORD BY SECRETARY OF STATE OF PERAK



Assalamualaikum Warahmatullahi Wabarakatuh,

Salam Perak Sejahtera 2030

The Perak State Government is wholeheartedly committed to steering socioeconomic development towards sustainability and inclusivity. Our focus lies in promoting sustainable environmental management, modernising digital service delivery, and upholding the principles of good governance, integrity and innovation.

As the State Secretary of Perak, I take immense pride in acknowledging the research endeavours initiated by Clinical Research Centre (CRC), Hospital Raja Permaisuri Bainun, Ipoh together with Ipoh City Council, a distinguished member of the WHO Network of Age-Friendly Cities and Communities. Under Perak Sejahtera 2030, the Perak State Government has delineated three primary objectives, one of which pertains to

Social Well-being. Hence, the well-being of senior citizens has also been acknowledged as no individual is excluded from the Perak Sejahtera Development Plan 2030.

The research findings not only resonate with our commitment, but also serve as a vital compass for shaping our future policies and programmes.

As we navigate the evolving landscape of our state's demographics, particularly the increasing elderly population, these insights become even more pivotal. By wholeheartedly embracing the needs and aspirations of our elderly citizens, we are fortifying our resolve to build a Perak that is not only economically vibrant but also socially inclusive and environmentally responsible. We believe these noble values are important to be applied in the soul of the younger generation as they are the coats that will manage the nation in the future.

“By wholeheartedly embracing the needs and aspirations of our elderly citizens, we are fortifying our resolve to build a Perak that is not only economically vibrant but also socially inclusive and environmentally responsible.”

This research stands as a testament to our unwavering dedication to fostering an age-friendly and prosperous Perak for generations to come. Together, we fervently strive to achieve a more equitable and prosperous future for all, driven by our shared vision of a thriving and harmonious Perak.

Finally, I would like to take this opportunity to congratulate the Clinical Research Centre (CRC), Hospital Raja Permaisuri Bainun, Ipoh for this timely study.

YB Dato' Ahmad Suaidi bin Abdul Rahim
Secretary of State of Perak,
Perak Darul Ridzuan,
MALAYSIA

FOREWORD BY MAYOR OF IPOH CITY



“It’s a testament to our resolve to shape an inclusive, age-friendly, smart, and thriving Ipoh City.”

Perak Sejahtera 2030.

We have embarked on the ambitious mission of transforming Ipoh into a SMART City by 2030. This innovative approach to urban management embraces technology, data integration, and community engagement. Our Smart City Action Plan for Ipoh 2020 - 2030 charts our path to becoming a smart, sustainable, and resilient city.

In parallel, the Perak Green Technology will focus on environmental sustainability while educating our community on green practices. Our vision also encompasses a prosperous and unified Perak community, thriving on volunteerism, moral values, and essential life skills.

Neighbourhood Watch Communities will ensure local safety and unity, improving the overall quality of life. Additionally, Prosperous Perak Squads will empower the community for impactful volunteer activities, irrespective of backgrounds.

Thus, Ipoh City’s integration into the Global Network for Age-Friendly Cities and Communities, marking a significant step towards ensuring our city caters to the diverse needs of our seniors. This initiative embodies our dedication to enriching the lives of our elderly citizens, emphasizing their health, participation, and security within our community.

This report mirrors our unyielding commitment to an ever-evolving city that prioritizes residents’ needs and values its senior citizens’ wisdom and contributions. It’s a testament to our resolve to shape an inclusive, age-friendly, smart, and thriving Ipoh City.

I extend my sincere gratitude to all contributors to this report and invite you to join us on this remarkable journey towards a more age-friendly, smart, and prosperous Ipoh City.

Dato’ Rumaizi bin Baharin @ Md Daud

Mayor of Ipoh City,
State of Perak Darul Ridzuan,
MALAYSIA

IPOH AGE-FRIENDLY CITY RESEARCH PROJECT TEAM

<p>OVERSIGHT PANEL</p>	<p>Dr. Sirajuddin bin Hashim Perak State Health Director, Perak, Ministry of Health MALAYSIA</p> <p>Dr. Megat Iskandar Bin Megat Abdul Hamid Hospital Director, Hospital Raja Permaisuri Bainun, Perak, Ministry of Health MALAYSIA</p>
<p>ENGAGED STAKEHOLDER</p>	<p>Dato' Rumaizi Bin Baharin @ Md Daud The Mayor of Ipoh City Council, Perak, MALAYSIA</p>
<p>PRIMARY RESEARCH TEAM</p>	<p>Dr. Philip Rajan Devesahayam Dr. Lim Xin Jie Dr. Low Lee Lan Mr Chang Chee Tao Ms Chew Chii Chii Ms Premaa Supramaniam</p>
<p>TECHNICAL REPORT WRITERS</p>	<p>Dr. Chow Lai Yeng Dr. Devin Kumar Asoka Kumar Dr. Lim Xin Jie Mr Chang Chee Tao Ms Chew Chii Chii Ms Nor Aizura Zulkifli Ms Premaa Supramaniam Ms Suria Junus</p>
<p>RESEARCH ASSISTANTS</p>	<p>Dr. Cufazleena Ameera Dr. Harsimran Kaur Bedi Dr. Nursyamirah Aisyah bt Othman Ms Aisyah Ahmad Shadzili Ms Chin Ei Wei Ms Norhazlina bt Ramle</p>

EXECUTIVE SUMMARY

The Executive Summary provides an overview of the technical report, focusing on the WHO Age-Friendly City concept and the inclusion of Ipoh City in the Global Network for Age-Friendly Cities and Communities. Age-friendly cities aim to enhance the quality of life for elderly individuals by promoting their health, participation, and security within their communities. Any local or sub-national government in WHO Member States can join the Global Network, even if they have not achieved age-friendliness yet, as long as they commit to working towards it.

Given the global trend of an aging population and with a significant portion of Ipoh's inhabitants being older adults (>60 years old), being part of the Age-Friendly Network is crucial for the city. Led by the Clinical Research Centre (CRC) at Hospital Raja Permaisuri Bainun, Ipoh City was officially registered as a member in the WHO Network of Age-Friendly Cities and Communities in December 2019, following endorsement from major stakeholders.

The subsequent research project, titled "Is Ipoh an Age-Friendly City?", utilized a mixed-method approach to identify gaps and unmet needs among older adults in Ipoh. The research involved a baseline survey among more than a thousand older adults and in-depth interviews with elderly individuals, caregivers, and healthcare providers. This comprehensive methodology explored the eight domains: housing, transportation, outdoor spaces, health services, communication, civic participation, respect, and social inclusion.

The research findings highlighted key issues, including insufficient priority parking for older adults and safety concerns in housing design, particularly in bathrooms. Challenges related to internet usage, home care services, and nursing home staff competence were also identified. Furthermore, concerns regarding the cost and accessibility of public transportation were raised.

This report amplifies the voices of Ipoh's elderly citizens, shedding light on their needs and the society's commitment to fostering an age-friendly environment through a holistic approach. It underscores the city's dedication to addressing the needs of its senior residents and promoting active and healthy aging.

The Executive Summary encourages readers to refer to the full report for a more comprehensive understanding of the research's outcomes. The report's focus on creating age-friendly communities and addressing the needs of older adults is paramount in ensuring their well-being and active engagement in society.

CHAPTER 1: INTRODUCTION TO IPOH CITY

1.1. Geographical and physical characteristics

Ipoh, Peninsular (West) Malaysia, on the Kinta River. Ipoh is Malaysia's third-largest city. Ipoh is the capital city of one of Malaysia's thirteen states, Perak. It is 180km north of Malaysia's capital, Kuala Lumpur, located by the Kinta River. The city has its flag and official seal and a motto, 'Ipoh Clean, Green and Progressive' (Ipoh Bersih, Hijau dan Maju). Surrounded by steep hills, except to the south, it lies on a flat alluvial plain in the Kinta Valley. The climate in Ipoh is tropical rainforest. Ipoh is more susceptible to the Intertropical Convergence Zone than the trade winds, and it rarely experiences cyclones, so it has an equatorial climate. The city's temperature varies little throughout the year, with an average temperature of 28 °C (82 °F). Ipoh sees high precipitation throughout the year, with an average of 200 mm (7.9 in) per month and a total of 2,427.9 mm (95.59in) per year. October's the wettest month, with an average rainfall of 297.2 mm (11.70 in). January is the driest month in Ipoh, with an average rainfall of 132.3 mm (5.21 in).

Ipoh has three rivers. The city lies in the heart of the Kinta Valley, by the Kinta River (Sungai Kinta in Malay). Kinta River is a branch of Peninsula Malaysia's second-biggest river, the Perak River), which flows 400 km (250 miles) long. Kinta River, in turn, branches into seven tributaries, of which two are in Ipoh: Sungai Pari and Sungai Pinji. From north to west, the Kledang mountain range runs across the city. The Perak River on its left bank and the Kinta River run parallel to the Bintang mountain range. This range is broken to the north of Ipoh by the Pelus River, a tributary of the Perak River that originates in the Titiwangsa mountain range to the east of Ipoh.

Ipoh has a spacious rectangular layout, and in the suburbs are imposing residences of wealthy mine-owners. As the country's mining capital, Ipoh is the most important station on the Kuala Lumpur–Butterworth railway and the focus of highways across the valley. A small airstrip links the area with other major west coast cities.

1.2. History

The Kinta River divides the historic center of Ipoh into two parts: Old Town and New Town. The history of Ipoh begins with the Old Town during the tin rush. "During the era of the Malay Rajas, Ipoh was only a small village. When the British colonial government ruled Perak around 1877, Ipoh was transformed into a town and came in droves, especially the Chinese who came to seek their fortune, so many Chinese subjects came here from Penang"(1).

Initially, Ipoh was the focal point of the most significant stopover and business for the surrounding districts. The supply of sewerage system parts commenced in 1898, and sewage tanks were introduced

in 1905. The first open space, now known as 'Padang Ipoh,' was held in 1898. Peoples Park and the J.W.W Birch (James Wheeler Woodford Birch) memorial area were built in 1909, and the Luba Perak Club field was built in 1904 (2).

Between 1905 - 1914, Yau Tet Shin expanded a new Ipoh town across the Kinta River, along Anderson Road (3). There were also railway stations, hotels, town halls, and post offices built (4). Similarly, cinemas and automobiles have begun to take place in Ipoh. Ipoh's geographic location in the rich tin-bearing valley of the Kinta River made it a natural center of economic growth.

Bus service undertook in 1910 and 1911, and an automobile registrar's office was established in Ipoh since then. The 'Kinta Sanitary Board North' was established in 1905-1915, and the 'Kinta District Board' was established in 1916-1941 under the administration of the 'British Military Administration' (5).

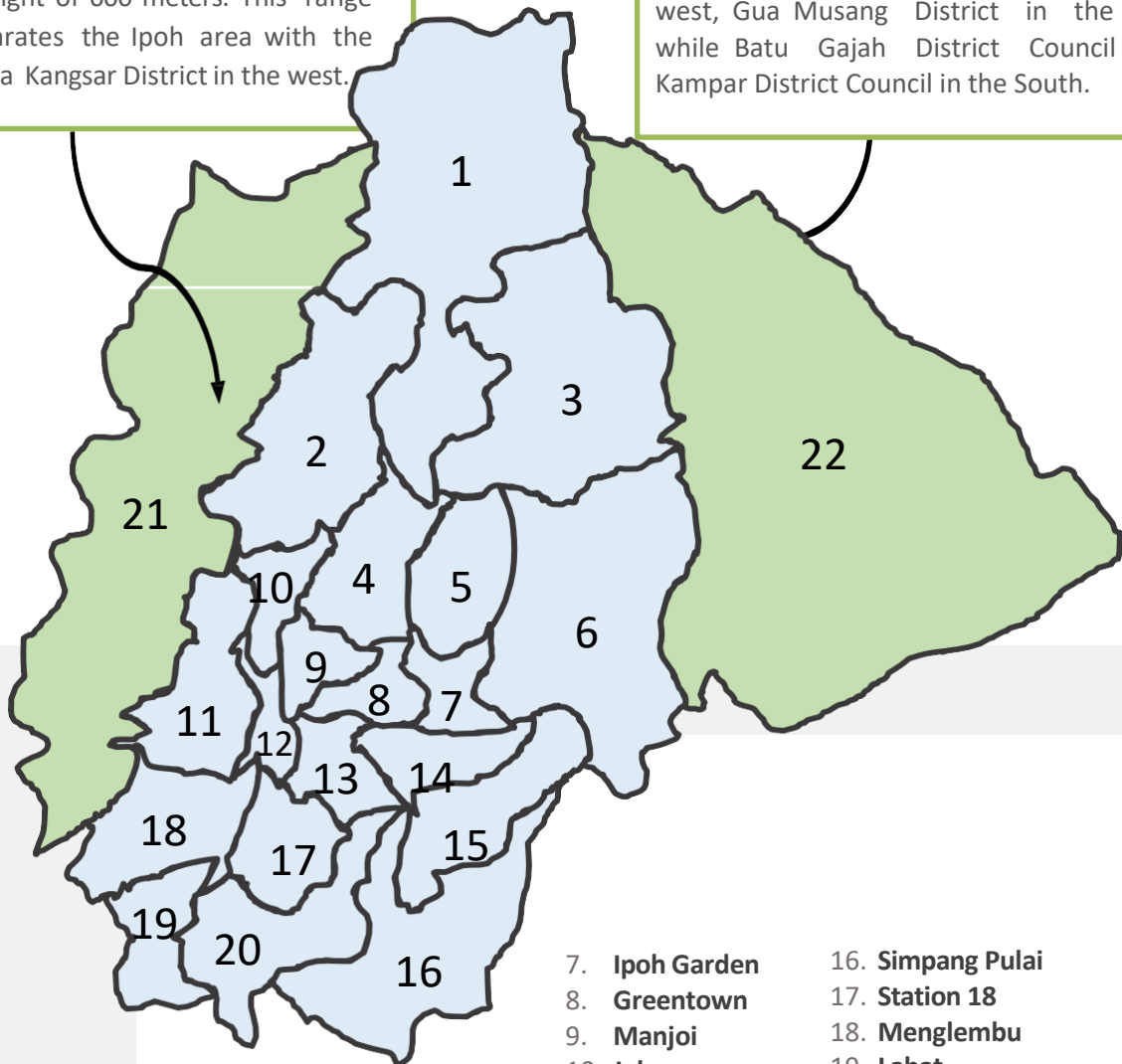
Throughout the 1920s and 1930s, the town continued to overgrow, primarily due to tin mining and rubber production in the surrounding region. The Japanese invaded Ipoh on December 15, 1941. During the Japanese Occupation, Ipoh was made the capital of Perak in place of Taiping. After liberation in 1945, Ipoh remained the capital of Perak (6,7).

On 27 May 1988, DYMM Paduka Seri Sultan of Perak Darul Ridzuan declared the status of a City to Ipoh, the Capital of Perak Darul Ridzuan. The Mayor is the chief executive of the Ipoh Municipal Council, also known as the 'Ipoh City Council.' As the Capital of Perak Darul Ridzuan, Ipoh is the center of administration, trade, sports, culture, finance, politics, religion, and education(8).

1.3. City structure: Districts

Ipoh is surrounded by the Kledang-Sayong range in the southwest at a height of 600 meters. This range separates the Ipoh area with the Kuala Kangsar District in the west.

Ipoh is in the District of Kinta which covers part of *Mukim Ulu Kinta*, part of *Mukim Sg. Ria* and part of *Mukim Sg. Terap* in Kinta district in Perak. District in the north and west, Gua Musang District in the East while Batu Gajah District Council and Kampar District Council in the South.



- 1. Chemor
- 2. Meru
- 3. Tanjung Rambutan
- 4. Tasek
- 5. Bercham
- 6. Tambun

- 7. Ipoh Garden
- 8. Greentown
- 9. Manjoi
- 10. Jelapang
- 11. Falim
- 12. Medan Kidd
- 13. Pasir Putih
- 14. Pasir Pinji
- 15. Gunung Rapat

- 16. Simpang Pulai
- 17. Station 18
- 18. Menglembu
- 19. Lahat
- 20. Pengkalan
- 21. Kledang-Sayong Eco Park
- 22. Ulu Kinta Reserve Forest

Figure 1: District structure

1.4. Demographics and population

The population of Ipoh city was **737,860** residents in the year 2015,

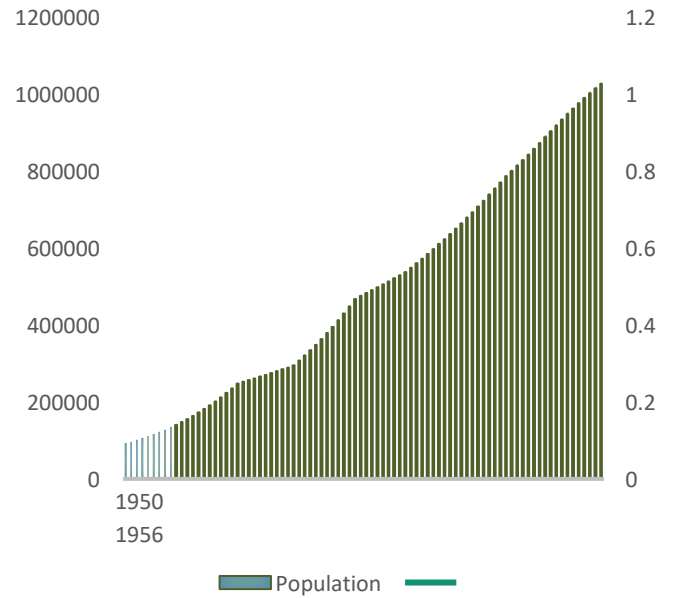


Will approximately be **887,711** by 2025 and **1,026,615** by



Ipoh population increasing with **92,000** in 1950 to **842,000** in 2022.

IPOH POPULATION



LIFE EXPECTANCY AT BIRTH, 2021



Male
72.0 years



Female
78.2 years

POPULATION BY AGE (%)



(0-4 years old)

20.3



(15-64 years old)

68.3

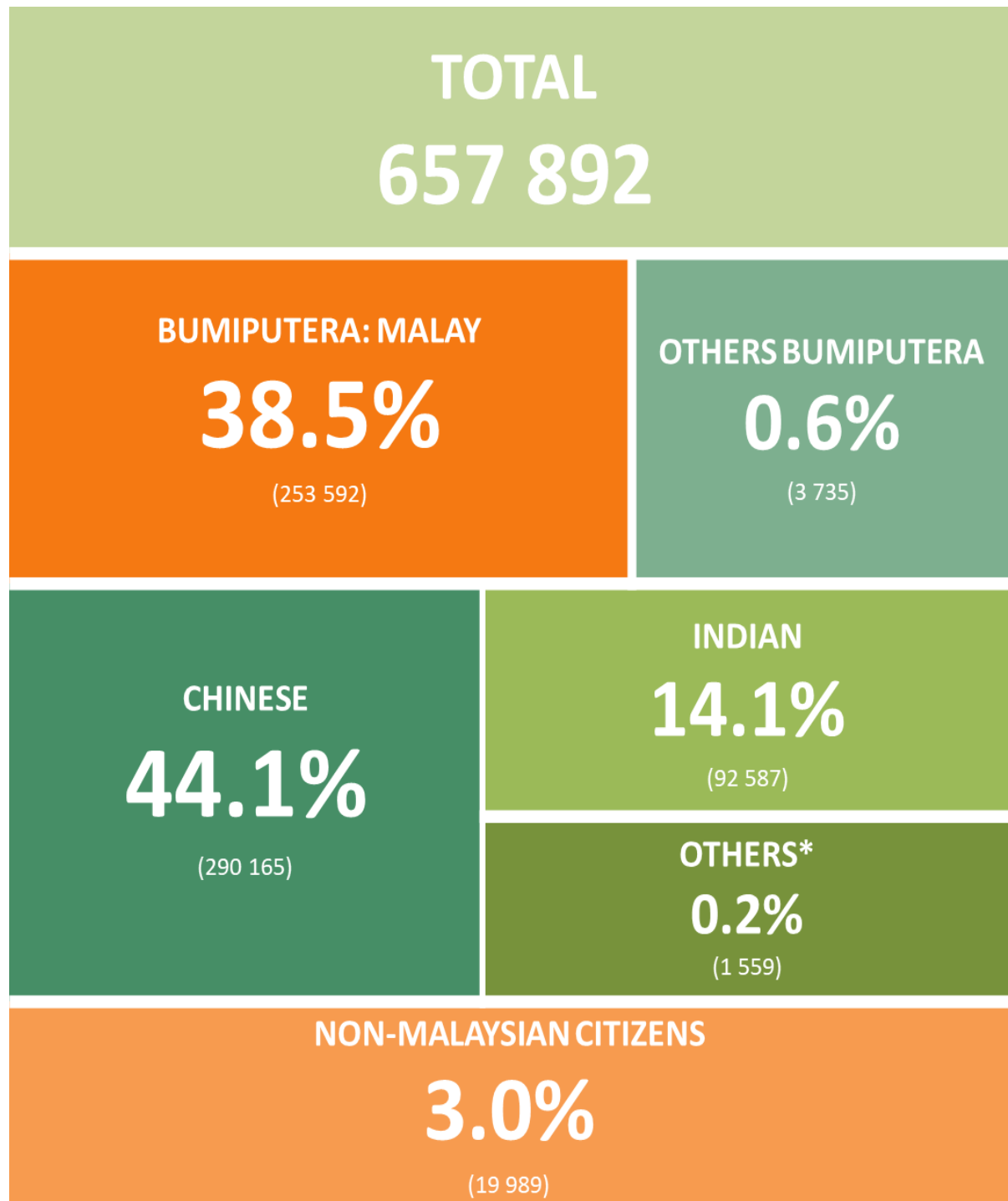


(65+ years old)

11.4

Source: World population review, 2022 (9)

1.5. Population by ethnic group of Ipoh city Council Authority Area



Source: Population Distribution and Basic Demographic Characteristics 2010 (10)

1.6. Socio-economics characteristics

1.6.1. Household expenditure

According to the Household Expenditure Survey Report by State and Administrative District, Perak from Department of Statistics Malaysia 2016, the composition of average monthly household consumption expenditure by major groups in Perak was RM3,564. The average monthly household consumption expenditure recorded by Kinta District was RM3,881 in 2019. Household consumption expenditure varies by age group. Households headed by individuals aged 35 to 44 years recorded the highest mean monthly household consumption expenditure with RM3,989; meanwhile, households headed by individuals aged 65 years and above recorded the lowest mean monthly household consumption expenditure with RM2,613. Expenditure for households with heads aged 65 years and above spent on average of RM2,613 per month as this household is concentrated on necessities such as housing, food at home, and health and others (Figure 2).

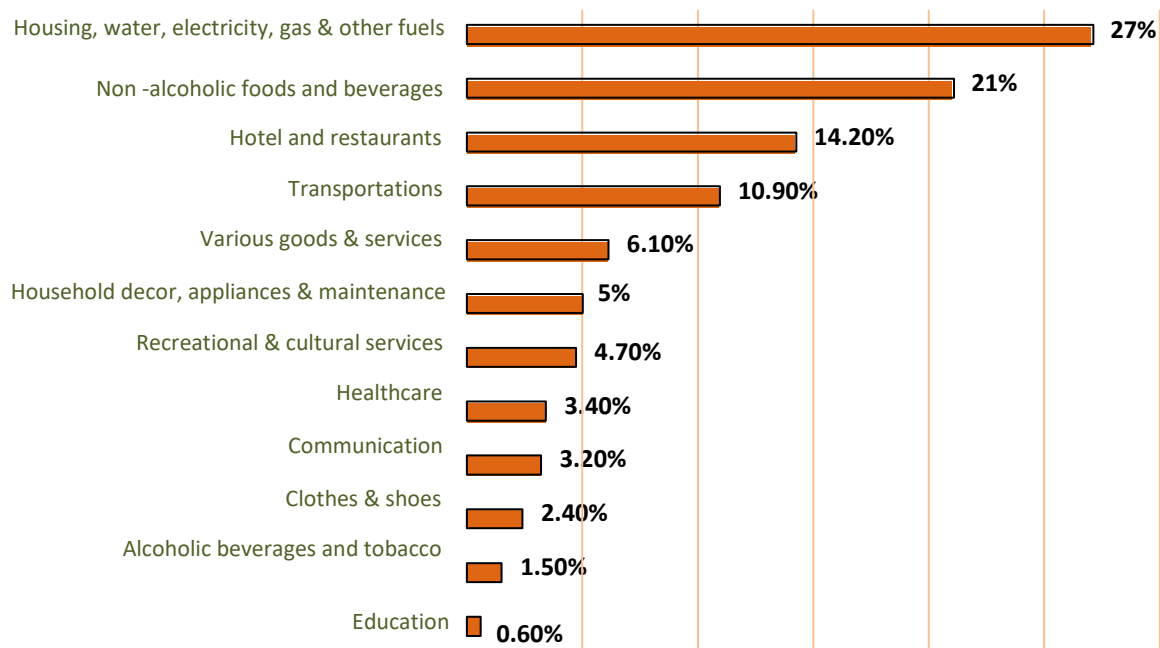


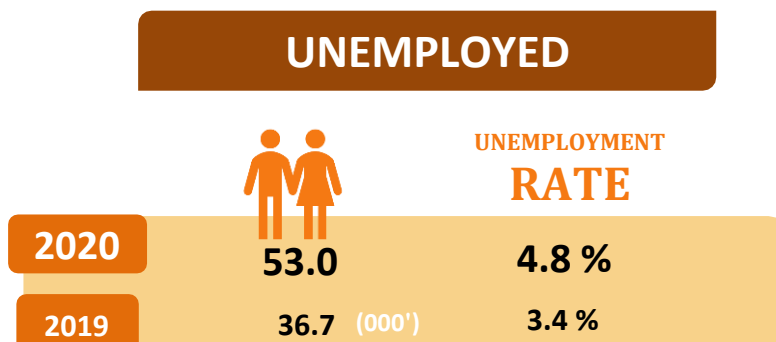
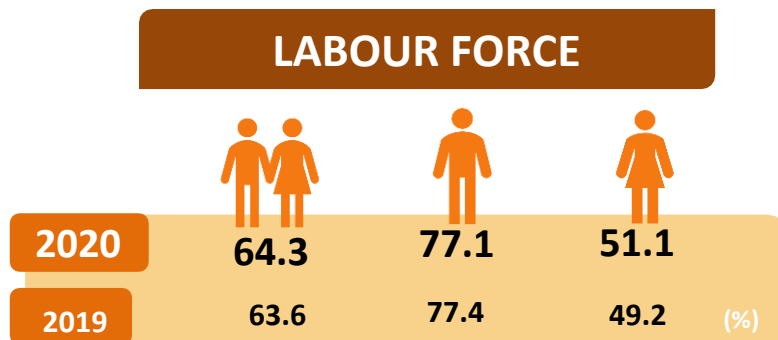
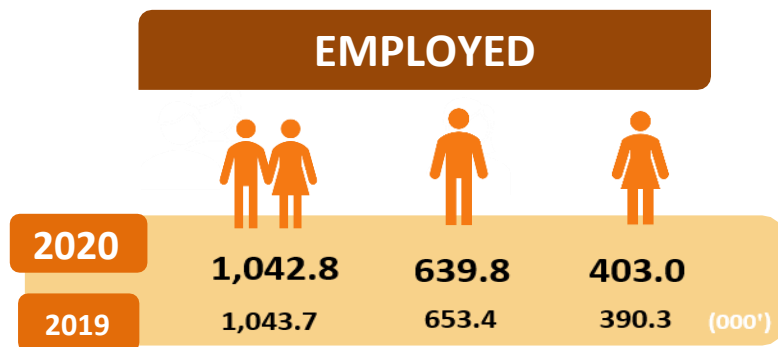
Figure 2: Expenditure for households with heads of 65 years and above (%)

Source: Household Expenditure Survey Report by State and Administrative District, Perak 2016 (11)

1.7. Employment status

The total number of employed persons in Perak in 2019 was 1043.7 million, with 653.4 thousand males and 390.3 thousand females. The total labor force in Perak in 2019 was 63.6 percent with 77.4 percent were male, and 49.2 percent were female. The unemployment rate in 2019 was 3.4 percent representing 36.7 thousand of the total population.

In comparison, the total number of employed persons in 2020 was 1.042.8 million, with 639.8 thousand males and 403.0 thousand females. Meanwhile, the total labor force in 2020 was 64.3 percent, with 77.1 percent male and 51.1 percent female workers. From 2019 to 2020, there are 1.4 percent increment for the total labour force participation in Perak. However, the total number of unemployed individuals in 2020 slightly increased to 4.8 percent with 53.0 thousand unemployment.



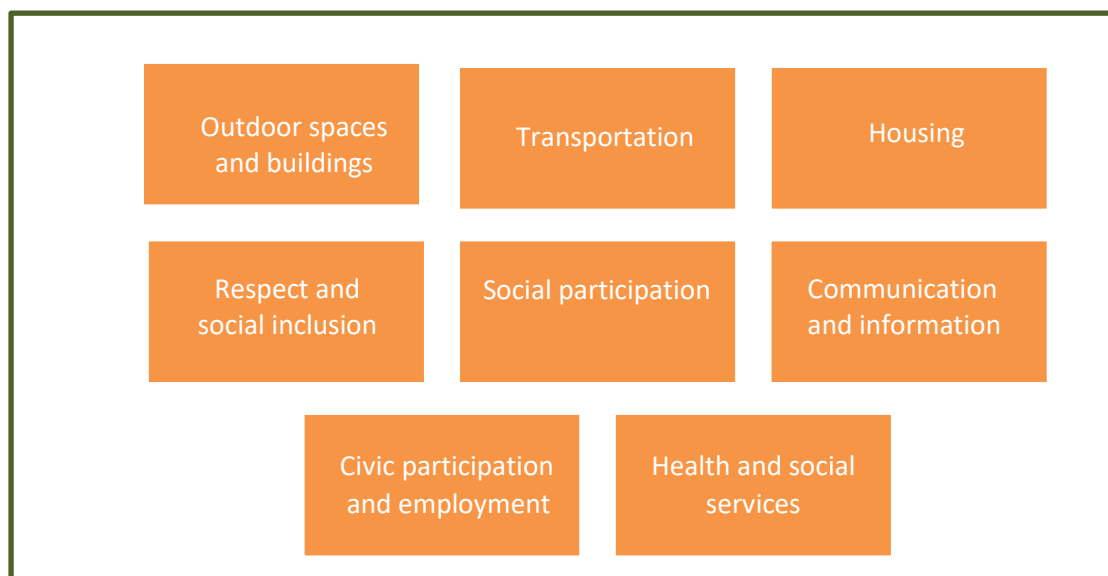
CHAPTER 2: INTRODUCTION OF AGE-FRIENDLY RESEARCH

“Age-friendly city” is an international effort, spearheaded by the World Health Organisation, to encourage and support intergenerational communities that are sensitive to world-wide aging populations. Essentially, it is to make cities a more accessible place for the aging population. Older people face numerous challenges due to the disability and other changes that age brings (12).

According to World Health Organisation, an age-friendly world "enables people of all ages to actively participate in community activities and treats everyone with respect, regardless of their age (13). It is a place that makes it easy for older people to stay connected to people that are important to them. And it helps people stay healthy and active even at the oldest ages and provides appropriate support to those who can no longer look after themselves.

An age-friendly city encourages active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age. An age-friendly city adapts its structures and services to be accessible to and inclusive of older people with varying needs and capacities. Thus, an age-friendly city is one that designs its structures and services to ensure that everyone, irrespective of their age, abilities or skills, enjoys good health and feels safe, actively participating in all aspects of social life.

The age-friendly city concept is based on the framework for active ageing released by the World Health Organization (WHO), with the principles of optimizing opportunities for health, participation, and security in order to enhance quality of life as people age. The 8 Domains of age-friendly city conceptualised by the WHO encompass aspects of (i) outdoor spaces and buildings, (ii) transportation, (iii) housing, (iv) social participation, (v) respect and social inclusion, (vi) civic participation and employment, (vii) communication and information, and (viii) community and health services.



Outdoor spaces and buildings, Transportation, and Housing are significant characteristics of the city's physical environment. These characteristics substantially impact personal mobility, security, and health promotion. Social participation, Respect, Social inclusion, and Civic participation and employment represent diverse aspects of the social and cultural environment that significantly impact individuals' participation and subjective well-being.

Creating environments that are truly age-friendly requires action in many sectors with the involvement of multiple levels of the government (14). Ipoh is ranked one of the nine places to retire in the world, reported in US News, a leader in ranking surveys. Ipoh is a top destination for long-stay Asian travellers, offering a high standard of living at a much lower cost, vast greenery, sunny climate and tasty food. Ipoh's freedom and fascinating culture is a magnet for active retirees. In addition, the friendly English-speaking locals make Ipoh city an accessible one for the foreigners and tourists (15).

The purpose of this study is to obtain the baseline perception of older people on the city's age-friendliness. Upon discussion with the Ipoh City Council, the current gap of information is "What the older people needs in the context of Ipoh as the aged-friendly city?". Thus, a quantitative study will be first conducted among the seniors to determine the current availability of various elements outlined under each domain, then qualitatively explain and interpret the quantitative findings. The situation of older people reflected through this study and provides the essential information to be distilled and analysed by gerontology experts and decision-makers in developing or adapting interventions and policies.

Research on aged population was categorised as one of the 11th Malaysia Plan Research Priority (16). The findings of this study will be useful to inform policymakers on the gap of age-friendliness with respect to the 8 major domains, and hence take necessary steps for quality improvement. This study has obtained the support from the below stakeholders: Director General, Ministry of Health Malaysia; Director of State Health Department, Perak; Menteri Besar (Chief Minister), Perak State and Datuk Bandar (Mayor) of Ipoh, Perak.

This research will be impactful towards contributing to the national strategic planning for creating an age-friendly city among older people.

CHAPTER 3: METHODOLOGY

3.1. Overview of the study

A mixed-method sequential explanatory design was used (Quantitative → Qualitative). The quantitative phase of the study was in the form of structured face-to-face or telephone interviews. In the qualitative phase, focus group discussion and in-depth interviews methods were used. The study team opted to conduct a mixed-method sequential explanatory study, whereby a quantitative study was initially conducted among older adults in order to obtain their view on the accessibility and importance of different elements stated under each domain of the WHO ageing framework. Subsequently, any issues identified in the quantitative study that required more information and in-depth understanding were qualitatively studied among the key-informants (e.g., older people, city council, city planner etc.). This was pivotal to help explain, interpret or contextualise quantitative findings. There were always certain aspects of a city (the physical fabric of the built environment, for instance) that were more easily quantifiable, measurable and thus more easily able to demonstrate improvement in (or a step backward) in tangible terms. However, there were certain aspects of a city that were less quantifiable such as "social and participation". Therefore, it was vitally important for cities to include and seek out alternative 'measures' so that these other aspects of Age-friendliness (creativity, respect and social inclusion, notions of reciprocity) were included and integrated within an overall evaluation process. This involved, for instance, giving weight and visible space to: subjective data, the 'metrics' of older people's own experiences as conveyed directly to the city – alongside more familiar metrics and measures.

3.2. Quantitative phase

We aimed to determine the availability and perceived importance of each element stated under 8 domains of the WHO ageing framework, among the older adults. In this study, we focused on the "lived" experience of older people aged ≥ 60 years - that is, what seniors experienced as age-friendly in their daily lives in the community.

3.2.1. Sample size and sampling method

For the quantitative phase, a baseline community survey was conducted among the senior population of age 60 and above residing in Ipoh City via structured interview sessions using a guided questionnaire via either face-to-face interviews or telephone interviews.

The sample size was estimated using a sample size calculator for estimation (version 1.0.03, 2008)¹ based on the formula for estimation of a proportion with finite population correction and using a value of 0.5 (50%) as the desired proportion to be estimated. It was the most conservative approach as there was no specific primary outcome measure for the survey. The survey aimed to measure the baseline

perceived characteristics among seniors in terms of the accessibility and importance of selected elements of the 8 domains highlighted by GNFAACC, WHO for Age-friendly city. Based on the census population estimate by Department of Statistics Malaysia (DOSM), Ipoh City Council was populated by 739,700 people in year 2019 where 15.375% (382,500 / 2487800) were older adults aged ≥ 60 . An estimated total population aged ≥ 60 of 113,729 was used, with a precision of 0.03. A total of 1068 samples were required for the survey.

3.2.2. Sampling technique

Several sampling techniques were employed to recruit eligible candidates for the interview survey according to the sites. Non-probability sampling of convenient and snowball sampling techniques was employed to ensure that the 3 categories of elderly people – i) healthy, ii) unhealthy but active and iii) bedridden individuals, were surveyed.

- a) Convenient sampling & snowball sampling techniques were employed at consented government and private Health Clinics and hospitals. This strategy was to capture unhealthy but active and bedridden elderly patients as survey participants.
- b) The snowball sampling technique was employed in the community. Social and community activities were conducted by Ipoh City Council, Non-profitable Organisation (NGO), and the Perak State Health Department from April 2021 to July 2021 in Ipoh. The activities were aimed at recruiting participants. The data collector took the opportunity to recruit survey samples. The data collector identified potential candidates and conducted the survey among consented participants. After the interview, the participated respondent was asked to invite or encourage other potential candidates via mouth-to-mouth message delivery or by sharing a Google® Form Link.

Sampling was done in a ratio of 2:1 for sampling at health clinic / hospital: sampling in community. The research team decided to have an equal ratio between all the sampling techniques at their respective sites. Unfortunately, nursing / old-folk homes were excluded in the sampling strategy due to the fact that visiting restrictions in the nursing / old-folk homes were imposed in conjunction to Covid-19 pandemic in Malaysia. The sample size distribution according to the different sampling strategy and target population.

Sampling method	Target population	Sample size required
Convenient & snowball sampling	- Government and private Health Clinics and hospitals	712
	- Unhealthy but active and bedridden elderly patients	
Snowball sampling	- Community	356

	<ul style="list-style-type: none"> - Social and community activities by Ipoh City Council, NGO and the Perak State Health Department - Events in Ipoh from April 2021 to July 2021 in Ipoh. - Healthy and unhealthy but active elderly individuals. 	
	Total	1068

Non-probability and non-random sampling were used as the aim of the survey was to gather the baseline perception of the targeted population and not to generalise the findings but to analyse within the sample according to the needs of the stakeholders.

3.2.3. Survey

A baseline community survey was conducted among the older population of age 60 and above residing in Ipoh City via structured interview sessions using a guided questionnaire via face-to-face interview sessions. However, in a situation like Movement Control Order (MCO) due to COVID-19 pandemic in the country, the face-to-face interaction was limited, and participants were interviewed via telephone conversation after obtaining written informed consent or virtual consent (through Google® Form).

i) Face-to-face interview:

The data collector took the opportunity to recruit survey samples accordingly. The data collector identified potential candidates and obtained written informed consent prior to the conduct of the survey. During the interview, the data collector recorded the responses to the questions in the hardcopy version of the questionnaire immediately before proceeding to subsequent questions. Recorded responses were transcribed into electronic version later.

ii) Interviewed via telephone conversation.

After confirming that the participant had consented to take part in the study (either via written informed consent or virtual consent), a structured telephone interview was conducted. During the telephone interview, the data collector recorded the responses to the questions in the hardcopy version of the questionnaire immediately before proceeding to subsequent questions. Recorded responses were transcribed into electronic version later. No audio recording was done during the interview session.

3.2.4. Instrumentation

The baseline survey used the adapted English version of AARP Livable Communities – Great Places for All Ages Survey Questionnaire (17). It was developed by the United States AARP Livable

Communities Organisation. The original survey tool was developed based on the eight areas that were suggested by WHO of age-friendly cities which could influence the quality of life in a community, especially older adults. The eight domains of age-friendly city encompassed aspects of (i) outdoor spaces and buildings, (ii) transportation, (iii) housing, (iv) social participation, (v) respect and social inclusion, (vi) civic participation and employment, (vii) communication and information, and (viii) community and health services.

The content validity of the questionnaire, which assessed its relevance and comprehensiveness, was made through subjective and collective judgement (18). Content validity and face validity were done by the research team together with geriatricians, Ipoh City Council representatives (representative of the 8 domains), and a representative from the State Health Department via several sets of discussion, review, and finalising the modified English version of the Survey Questionnaire.

The modified version was then pre-tested among 6 health staff (doctor, nurse, matron, medical assistant and research officer) and a non-health staff (administrative staff). After the pre-testing among health staff, another similar pre-testing was conducted among the 3 elderly (Malay, Chinese and Indian older adults, including literate and illiterate) who were able to converse in English. They were captured at various spots in the community within Ipoh. During the pre-testing, the respondents were asked to comment on the understanding of each item and language comprehension through cognitive interview. Amendments were made based on the suggestions and the English version of the Questionnaire was finalised by the research team.

The original version of the AARP Livable Communities – Great Places for All Ages Survey Questionnaire was adapted and modification was made on the structure of the questions and some of the contents in it so that the tool suits the local population. Content modifications were made on some of the items such as types of home, medical emergency response system, snow removal by moving or replacing those where necessary which suits the local context. Most of the items were shrunk into smaller segments without altering the content to reduce the number of questions to be asked during the interview session, as the respondents we pre-tested commented that the original questionnaires were too lengthy.

The demographic section in the original questionnaire was relocated (gender, marital status, ethnicity, date of birth and educational level), while the questions on spoken languages, political views of respondents and season-related questions in the original questionnaire were removed. Irrelevant items in the original AARP questionnaire were removed (Item no. 2, 3, 5, 7, 8, 9, 11, 12, 24, 37, D4, D7, D8, D9, D12, D13).

The translation process of the English version of the modified questionnaire into Malay, Chinese, and Tamil was conducted by using internationally accepted translation process (19–21). The translation process was conducted by 2 independent groups of individuals for forward and backward translation.

T1 was the subject-matter expert (medical background) and should have been aware or been informed about the concept of the questionnaire. T1 contributed more of subject matter perspective during forward translation(20). Whereas, T2 was the non-subject matter expert (non-medical background) and should not have been aware of the concepts of the questionnaire. T2 reflected the laymen language used in the normal population (20). T1 and T2 independently involved in forward translation and generated the translated version via a discussion and thus finalised the translated version of the questionnaire. Then, BT1 and BT2 were independent non-medical background personnel involved in the backward translation. They were blinded on the original version of the questionnaire and had to be good in English(20). After the translation, there was a discussion among the research team together with the translators to finalise the Malay, Chinese, and Tamil versions of the questionnaire.

A pre-test was conducted among 3 sets of health staff (1 doctor, 1 nurse, and 1 research officer) and a non-health staff (administrative staff) to test the Malay, Chinese, and Tamil versions of the questionnaire. Amendments were made based on the suggestions and were reviewed by the research team. Additional 3 sets per language of pre-testing were conducted among the community of elderly population who were able to converse in Malay, Chinese, and Tamil languages. Amendments were made based on the suggestions and the Malay, Chinese, and Tamil versions of the Questionnaire were finalised by the research team.

Pilot testing was conducted among elderly people of aged 60 and above to validate further the finalised version of the questionnaire. Fifteen respondents were required to participate in the pilot testing for each version (i.e. 15 for English, 15 for Malay, 15 for Chinese, and 15 for Tamil versions). Each participant was required to participate twice in the study to test for test-retest reliability analysis of the tool. To ease the recruitment process, participants were recruited among Raja Permaisuri Bainun Hospitals staff or their family members of age 60 and above. Interviews were conducted among research investigators. After the first round of the interview, a similar group of participants was re-interviewed after 1-week time. For the reliability test, internal consistency and test-retest reliability were used. Cronbach's alpha was presented where a value more than 0.5 was acceptable and a value more than 0.7 was considered as good (22). For Kappa agreement, a Kappa value less than 0.2 was considered poor, 0.21-0.40 was fair, and 0.41-0.60 was moderate. 0.61-0.80 was good and 0.81-1.00 was very good (23). The questionnaire was further modified based on the pilot test findings. This set of data was not included in the final analysis.

The questionnaires contained 2 sections i) demographic characteristics and ii) baseline information on the 8 domains for age-friendly city in Ipoh. The demographic section included personal characteristics and household information. The second section contained multiple choice and open-ended questions on availability, accessibility, and importance of the elements of 8 domains suggested in The Checklist of Essential Features of Age-friendly Cities by WHO. Most of the items included in the questionnaire were based on the needs of the stakeholder to view the baseline perceived responses by the elderly in Ipoh. Availability and importance of the elements under the suggested 8 domains were included.

Accessibility of the elements was addressed for limited items in the questionnaire as this segment required further probing which was concentrated in the Qualitative FGDs.

Informed consent was taken from the respondents before their participation. The signed informed consent form was passed to the investigators at the end of each data collection day. There was a final question in the survey which was purposely added to ask on the interest of the participant whether he/she could be contacted if further information was needed. Based on the response, if the candidate agreed to participate further, he/she would be asked to provide contact details (i.e. name and telephone number) after signing an additional consent form. However, no personal identifiers were collected in the questionnaire.

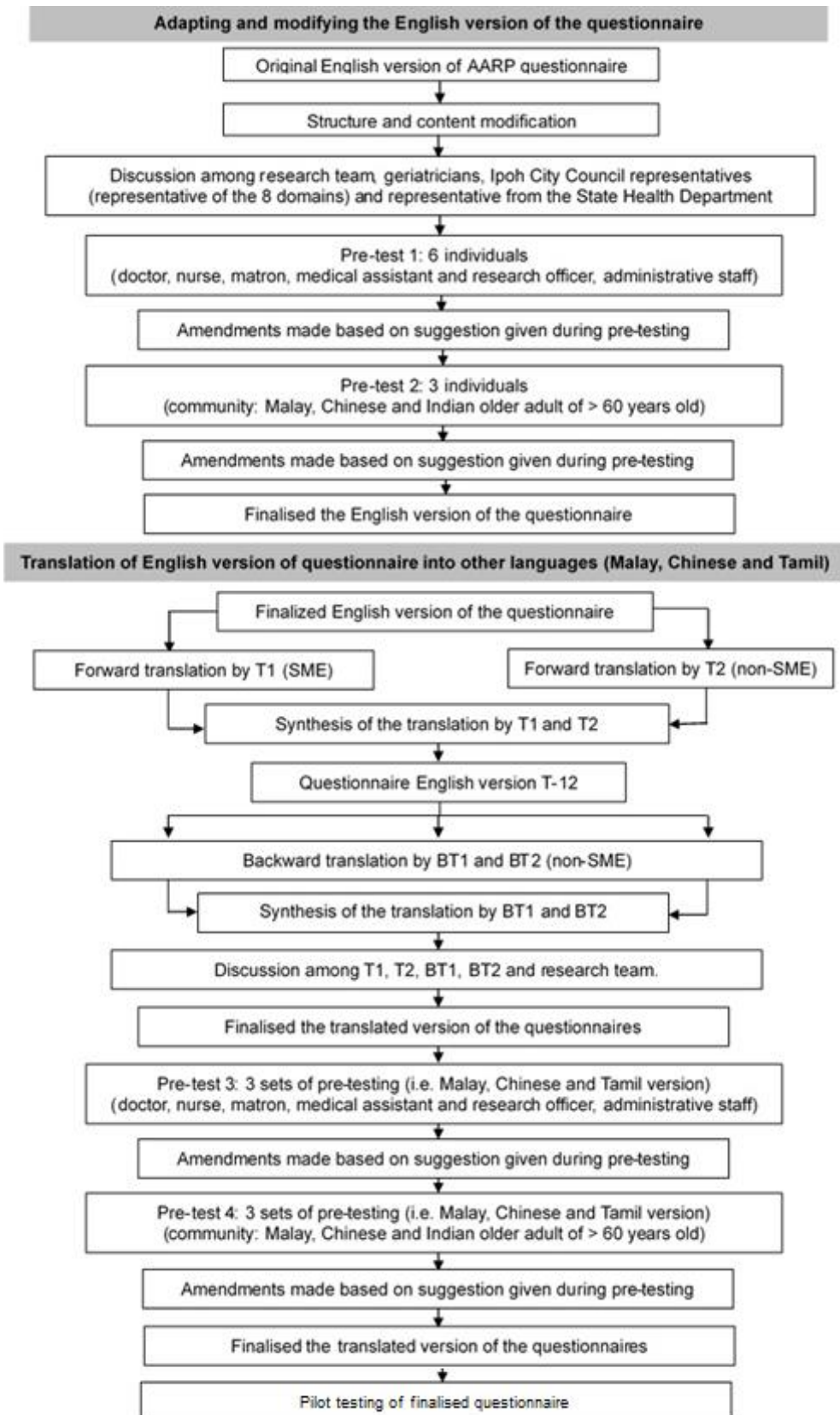


Figure 3: Questionnaire modification, translation and pre-testing summary

3.2.5. Data analysis

The data analysed using the Statistical Package for Social Sciences (SPSS) version 20.0 (USA). The data was analysed descriptively with frequencies and percentages, while gap score analysis was performed for 32 items of the 8 age-friendly domains. The gap scores were generated by comparing the importance and availability score (24). The gap score was categorized as such: 0=not important OR important and element available; 1=important but unsure whether the element is available; 2=important but element not available in Ipoh. Responses with unsure importance or missing data were not included into the gap score analysis. The individual item mean gap score was generated by dividing the total number of subjects with the perceived gap scores by the total number of valid responses for that item and multiplying them by 100. The domain gap scores were generated by summing the item mean gap scores and divided by the total number of items in the particular domain.

Perceived gap score definition	
Gap score	Meaning
0	Not important OR important and element is available
1	Important but unsure whether the element is available
2	Important but element not available in Ipoh

INDIVIDUAL ITEM MEAN GAP SCORE

$$\left(\frac{\text{Total number of subjects with the perceived gap scores}}{\text{Total number of valid responses}} \right) \times 100$$

DOMAIN GAP SCORES

$$\frac{\text{Sum of the item mean gap scores}}{\text{Total number of items in the domain}}$$

3.3. Qualitative phase

3.3.1. Rationale of qualitative study

There were always certain aspects of a city (the physical fabric of the built environment, for instance) that were more easily quantifiable, measurable and thus more easily able to demonstrate improvement in (or a step backward) in tangible terms. However, there were certain aspects of a city that were less quantifiable. Therefore, it was vitally important for cities to include and seek out alternative 'measures' so that these other aspects of Age-friendliness (creativity, respect and social inclusion, notions of reciprocity) were included and integrated within the study. This involved, for instance, giving weight and visible space to subjective data, the 'metrics' of older people's own experiences as conveyed directly to the city – alongside more familiar metrics and measures (25).

The view or experiences of older adults and people who cared for older people for this phase enabled stakeholders to have an in-depth understanding of their needs and expectations. In addition, the stakeholders were interviewed in-depth to triangulate with the findings emerging from the experiences of the older adults and their caregivers. Exploring opinion with stakeholders enabled further discussion about the suggestions raised by the older adults and carers.

3.3.2. Objectives of qualitative study

The qualitative study aimed to explain the finding from quantitative results. The views of older people and their caregivers on the community's age-friendliness city will further explain what are the challenges in providing for older adults in domain with low score (percentage) on 'availability' but high score on deemed 'importance' by the respondents. This will help to explain the reasons for the quantitative findings. The integration of mixed methods sequential explanatory design provides a deeper insight into the issues and suggestions for improvement; thus, the intervention can be more guided with this mixed methods research design.

3.3.3. Study design and setting

In-depth interviews (IDI) were used as a method of data collections. An audio recording of the interview session was taking place to facilitate the analysis. Given the nature of the pandemic, that required physical distancing and wearing a face mask, either face-to-face interviews or virtual interviews were conducted according to the participants' preference and convenience.

3.3.4. Study population

The study population consisted of three groups, namely (i) older adults, (ii) caregivers, and (iii) stakeholders.

i) Older adults

The older adult was identified from the pool of respondents who consented to IDI during the quantitative survey. Older adults from various backgrounds were invited to participate to ensure maximum variation of socio-demographic characteristics. This was to ensure that older adults with diverse characteristics were included, and hence, the findings would be representative of their views and experiences in the local setting (Ipoh City). Additional IDI was conducted if necessary to ensure that no new information was forthcoming and reached the data saturation. Older adult participants from all IDI covered variations of social demography background as follows:

1. Social economic status (e.g., low and middle)
2. Ethnicities (eg: Malays, Indians, Chinese, and Others)
3. Gender (Men and women)
4. Aged in years (60 to 74, 75 and above)
5. Health status (well, long-term illness)
6. Disability Level (none, mild, or moderate disablement)
7. Ipoh stay area (zones A through E)

Each completed IDI was immediately transcribed and analysed by the researcher. Any information gap identified was prompted in the next IDI.

ii) Caregivers

Caregivers include family, paid or voluntary caregivers who have been taking care of older adults part-time or full-time. The representatives of different characteristics were selected for IDI.

iii) Stakeholders

The stakeholders were professional key informants, including clinical specialists, geriatricians, and government officials.

3.3.5. Sampling method

A purposive sampling technique for selecting the participants was used for recruiting the participants. Older adults were purposively invited from the list of those who consented to give their contact details during the quantitative study. They were considered based on the scores of the survey and their demographic characteristics.

On the other hand, a caregiver was purposively invited from the nursing home/old folks home. Meanwhile, a family caretaker was snowballed based on the suggestion/recommendation from the older adults. The caregivers recruited were not necessary to pair with older adult participants.

The stakeholders were identified based on the findings of IDI with older adults and caregivers as a measure of triangulation.

3.3.6.Data collection

In light of the COVID-19 pandemic, participants were able to select a face-to-face or virtual interview approach.

i) Older adults

Older people who had initially consented for the researcher to call them for an interview when they were first recruited in the quantitative survey were contacted by phone, and they were asked again for their willingness to participate in the IDI. They were free to decide the time and date that was convenient to them for an IDI.

Should a face-to-face interview be a preferred choice for older adults, the suggested area of the interview would be the nearest primary care health clinic that was nearest to them; the best would have been their next appointment to refill their medication or the date of the clinic appointment. If this were deemed problematic, a telephone call interview (virtual) would have been suggested to the participants.

ii) Caregivers

Caregivers were approached via telephone calls, and they were invited to join the IDI. They were free to decide the time and date convenient to them for an IDI. Prior to a telephone interview, verbal consent was obtained, and the interview was audio recorded.

Caregivers from the nursing/old-folk home were contacted by phone. During the pandemic, visitors were not allowed to enter the nursing/old folks home, so they were invited by phone if they were interested in participating in IDI. They were free to decide the time and date for an IDI if they agreed to participate. The interviews were taken place via telephone and audio recorded.

iii) Stakeholders

They were contacted via telephone by first introducing the aims of our study and their willingness to participate in this study. Once verbal consent was obtained, they were asked for their preferences for methods of interview, either virtual (Zoom meeting or telephone calls) or face-to-face. An audio recording was taken for each interview.

3.3.7.Data analysis

Each interview was audio-recorded, and the recordings were transcribed as soon as each group completed the discussion. The analysis and reporting of data were processed in the following successive steps adapted from Braun V (2006)(26).

Table 1: Steps of thematic analysis(26)

<p>Step 1: Familiarising with the data Self-immersed in the data and familiarize with the depth and breadth of the content. Immersion involves repeatedly reading the data in an active way (searching for meanings, patterns etc.)</p>
<p>Step 2: Transcription of verbal data Transcribe FGD/IDI into written form to conduct thematic analysis. Transcribing is also an interpretative act to create meanings from the data. It requires a thorough 'orthographic' transcript (a verbatim account of all verbal and nonverbal utterances)</p>
<p>Step 3: Generating Initial Codes To produce initial codes from the data. This is part of the analysis by organizing the data into meaningful groups.</p>
<p>Step 4: Searching for Themes To sort the different codes into potential themes and collate all the relevant coded data extracted within the identified themes. To link the relationship between codes, themes and different levels of themes.</p>
<p>Step 5: Reviewing themes To devise a set of candidate themes and refine them, considering the internal homogeneity and external heterogeneity of each theme.</p> <p>Two levels of review: Level 1 – review the coded data extracts Level 2 – review the individual themes in relation to the entire data set</p>
<p>Step 6: Defining and naming themes To define and refine the themes and identify the essence of each theme. Subsequently, organize the extracts for each theme and organize them into a coherent and internally consistent account.</p>
<p>Step 7: Producing report To write up the thematic analysis in order to provide a concise, coherent, logical, non-repetitive and interesting account of the story of the data.</p>

CHAPTER 4: DOMAIN 1 - OUTDOOR SPACES AND BUILDINGS

This chapter focuses on assessing the perceived importance and availability of age-friendly outdoor spaces and buildings in Ipoh.

The environment in the vicinity has a substantial impact on the well-being and daily experiences of older individuals beyond their residences. A well-maintained urban area featuring properly kept parks, sufficient resting spots, safe pedestrian paths, well-constructed buildings, and a secure atmosphere establishes an ideal setting for older individuals to live comfortably and age in place.

4.1. Usage of outdoor spaces

Table 2 presents data on the usage of recreational parks in Ipoh by senior respondents who participated in the interview. From a total of 1061 respondents, the majority (83.5%) of them did not visit any recreational parks in Ipoh within 4 weeks preceding the interview. Among the remaining respondents, 1.8% had visited a recreational park at least once, 8.0% had visited between 2 and 10 times and 6.6% had visited between 11 and 30 times. Only one respondent reported visiting recreational parks in Ipoh more than 30 times in the preceding 4 weeks of the interview.

Table 2: Usage of outdoor spaces by the survey respondents in Ipoh City

Elements	n	%
Visited recreational parks in Ipoh in the last 4 week from the time of interview		
Never	886	83.51
At least once	19	1.79
2-10 times	85	8.01
11-30 times	70	6.60
>30 times	1	0.09

4.2. Accessibility of outdoor spaces and buildings

Table 3 describes the perceived accessibility of various elements to older people under the outdoor spaces and buildings domain for an age-friendly city with regards to Ipoh. There were a total of 1059 respondents. The majority of respondents (75.5%) found that parks and recreational areas in Ipoh are accessible to older people. Public buildings and facilities such as hospitals, banks, post offices and others are vital for various daily functions, and ensuring accessibility to these places is essential for the elderly population. Approximately 87.9% of respondents reported that these public places are accessible to older people. Public restrooms are undeniably essential public amenities. More than half of the respondents (58%) found public restrooms in Ipoh to be accessible to older people with varying physical abilities. However, about a quarter (24.7%) were unsure about this aspect. Despite

accessibility, the well-maintained public parks, public buildings and facilities are pivotal to ensuring a comfortable and safe experience, especially for older people. Approximately 75.5% of respondents indicated that these places were well maintained, whereas only about 16.2% felt they were not adequately maintained in Ipoh. Safety and security are fundamental human needs, ranking second in Maslow’s hierarchy of human needs, just after physiological needs like food and water. The availability of neighbourhood watch contributes to fostering a sense of security among residents, especially the older individuals. However, only about half of the respondents (51.2%) reported the availability in Ipoh. About 39% of respondents felt this was not available, while 9.8% were unsure.

Table 3: Accessibility of various elements in the outdoor spaces and buildings domain for an age-friendly city in perspective of Ipoh city.

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Accessibility of the following to older people:							
Park and recreational areas	800	75.54	128	12.09	131	12.37	1059
Public building and facilities (eg. hospital, post office, bank, offices, telephone booth, others)	931	87.91	85	8.03	43	4.06	1059
Public rest rooms accessible to older people of different physical abilities	614	57.98	184	17.37	261	24.65	1059
Well-maintained parks, public building and facilities	799	75.45	171	16.15	89	8.40	1059
Neighborhood watch programs (eg: RELA, Rukun Tetangga)	542	51.18	413	39.00	104	9.82	1059

4.3. Perceived importance of the outdoor spaces and buildings

Table 4 describes the perceived importance of various elements within the outdoor spaces and buildings domain for an age-friendly city from the perspective of residents in Ipoh City. A substantial 92.0% of the respondents believe that providing access to parks and recreational areas is crucial for the well-being of older individuals. A majority (95.5%) of the respondents agree that accessibility to public buildings is vital for the elderly population. About 89% of respondents emphasize the importance of providing accessible public restrooms for older individuals with varying physical abilities. A vast majority, accounting for 95.8%, underscore the significance of well-preserved parks, public structures, and amenities in good condition. Only less than 1% perceived them as not necessary. A noteworthy 90.4% of respondents recognize the importance of neighbourhood watch programs.

Table 4: Perceived importance of various elements in the outdoor spaces and buildings domain for an age-friendly city in perspective of Ipoh city.

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Accessibility of the following to older people:							
Park and recreational areas	972	91.96	20	1.89	65	6.15	1057
Public building and facilities (eg. hospital, post office, bank, offices, telephone booth, others)	1009	95.46	14	1.32	34	3.22	1057
Public rest rooms accessible to older people of different physical abilities	939	89.00	19	1.80	97	9.19	1055
Well-maintained parks, public building and facilities	1013	95.84	10	0.95	34	3.22	1057
Neighborhood watch programs (eg: RELA, Rukun Tetangga)	956	90.44	33	3.12	68	6.43	1057

4.4. Gap score analysis for outdoor spaces and buildings domain

Table 5 presents the mean percentage gap score for the outdoor spaces and buildings domain of an age-friendly city, specifically in Ipoh city which was found to be 25.5%. Based on the analysis of gap scores for all elements among the respondents, it was found that the element with the highest gap score was access to neighbourhood watch. In particular, 5.4% of the respondents reported perceiving a gap score of 1, whereas 37.9% reported perceiving a gap score of 2.

Table 5: Gap score analysis for outdoor spaces and buildings domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)
		"Score 0: No perceived gap"		"Score 1: Perceived gap"		"Score 2: Perceived gap"		
		n	%	n	%	n	%	
Park	992	811	81.8	68	6.9	113	11.4	18.2
Public building	1022	929	90.9	15	1.5	78	7.6	9.1
Rest rooms	963	625	64.9	168	17.4	170	17.7	35.1
Well-maintained parks	1022	800	78.3	55	5.4	167	16.3	21.7
Neighbourhood	989	561	56.7	53	5.4	375	37.9	43.3

25.5

4.5. Qualitative results

4.5.1. Theme I: Parks

Parks are essential urban sanctuaries that offer a respite from the hustle and bustle of city life. These green oases provide a tranquil environment where people can connect with nature, unwind, and engage in various recreational activities. Whether it is a sprawling city park with lush lawns and jogging trails or a small neighbourhood park with a playground for children, these spaces foster community bonding and a sense of well-being. Many older adults have said improvements in the park are needed, such as a designated cemented area where older people can perform exercises such as Tai Chi or dancing. Some have voiced that parks are not well maintained, whereby there were broken equipment and grass not being appropriately cut (Table 6).

Table 6: Theme of parks, its subthemes, and related quotes

Subtheme	Quote
Improvement of parks	In China, parks have designated areas for the elderly to perform physical activities like tai chi, not just a field. If our city could provide perhaps a cemented area for the elderly to exercise, that would be good.
	I wish there were more exercise equipment in the parks for different types of exercises, such as swinging and gliding.
	There is no place to exercise; there is only an empty field. Whereas in Singapore I see that they have bars, ropes and other equipment giving you more things to do in a park. For example, if you want to do stretches, there are bars for support. There is a big park in Ipoh Garden; however, they only have a few slides for the children, and they are also all broken.
	Then, if we have a garden, I mean, uh, outdoor places for people to exercise. It is because my son is working in Singapore. When I go there, I see everywhere the taman (a garden); they've got this area where people go to exercise, you know? (It is) like a mini garden right there. There is a stone path for you to walk, there are tables, bars and they've got ropes.
	For older people right, there are fewer places to sit and rest.
Inadequate maintenance of facilities	The fields are not attended to. The swings are broken. Those cement chairs have broken down (and are) not being attended to. They just cut the grass, and that's all.
	The grass is not well attended to. They're not swept after being cut. So we can't even use the field actually, you can't even play football with your grandchildren. The grass is still very long, even after they are cut.
	Those slides in the park are broken.

	At the Marine Park, the basketball court is not maintained. The basketball net is not there.
	There's nothing there. The grass over there is also very tall.
Unavailable Park	There are no parks in my area as I am staying in a <i>kampung tersusun</i> (re-organized village). It's a <i>kampung</i> (village) area. So there is no nearby playground, no place to rest, and there is no place for the elderly people to gather and so on.
	I don't have a park nearby.
Park accessibility to wheelchair	I think it is a bit difficult; there is no special place for wheelchairs to go in. Even the garden doesn't have it. All of it is grass, so we have to go on the grass.
	I won't bring her there because the path is so narrow, so pushing the wheelchair will obstruct other people unless they have a special lane for them to rest.
Well maintained park	Maintenance is okay. They take care of it well.
Inadequate parking in parks	Parking... if many people, of course not enough. Before COVID (COVID-19), Saturdays and Sundays (were) definitely not enough. Now, during COVID (COVID-19), sure enough, but we can't go out... Haha (laughs)

4.5.2. Theme II: Public buildings and Facilities

Public buildings and facilities serve as the backbone of any well-functioning society. These structures are designed to meet the diverse needs of the community, providing spaces for education, healthcare, governance, and recreation. These buildings and facilities are not just bricks and mortar; they represent a commitment to the welfare and progress of society, fostering a sense of unity and shared purpose among communities. Some older people are concerned with poor hygiene in certain facilities such as toilets. A few older people feel that fundamental services should be situated nearby for the sake of convenience (Table 7).

Table 7: Theme of public buildings and facilities, its subthemes, and related quotes

Subtheme	Quote
Convenient distance	Here, my <i>taman</i> (neighborhood) is very convenient. The bank is near the post office and the market. So everything I need I don't have to go to town. I don't have to go anywhere; it is just around here. If you move far, you need transport. I drive nearby (and I am) still okay; if you ask me to go far away, I'm not very confident.
	Oh yes, we must not be very far away from everything. Then you depend on people to bring you things, which is very difficult.

	<p>Here the houses' distances are like in the village. Supermarkets such as TF (a supermarket brand) are nearby, within walking distance. Children who are schooling also have schools nearby. (A) mosque and praying area are also nearby. Places to eat are also available. So for me, it's not difficult.</p> <p>Evenings I can eat nearby.</p>
Inadequate maintenance of public toilet	<p>Sometimes, when nature calls it's difficult, let's say I go for a short call, then it's all right. When you go for a long call, then it's a problem.</p> <p>Not comfortable, no. People have to really take care, like washing, but they don't. They don't even do this, then in the wards, even worse.</p> <p>Our drains are not swept. I mean, there's still this kind of accumulation of, you know, what we call those 'silk' substances.</p>
Need for Centralized Facilities	<p>It's not centralized, which is no good. It's very inconvenient.</p> <p>You know, that kind of place over there. I mean, you can build up a very beautiful place, centralized and promote public transport.</p>
Overcrowding	<p>Ipoh is such a nice place, but now Ipoh is no longer a nice place. It's so congested. Luckily, the COVID-19 came in and halted things for a while.</p> <p>Yes, the UTC (<i>Urban Transformation Centre</i>- a government initiative providing the urban community with key government and private sector services under one roof) is also crowded.</p> <p>Okay, it's not so congested like KL (Kuala Lumpur) and so on.</p>
Inadequate parking spaces	<p>Like there is no nearby parking available, it's far away. It's hard to walk far. If you go early in the morning, there will be available parking; if you go late, surely you can't get parking.</p>

4.5.3. Theme III: Services

Services are the lifeblood of any modern society, encompassing a wide range of essential functions that contribute to our daily well-being and comfort. From healthcare and education to transportation, utilities, and public safety, services play a crucial role in ensuring that our communities function smoothly. Ensuring equitable access to these services is a fundamental challenge for governments and communities as they strive to enhance the overall quality of life for their citizens. Some older individuals find the shift to cashless transactions to be troublesome, and they were fearful of digitalized services. There is a lack of complete provision of services whereby certain services are not available in the Urban Transformation Center- a government initiative providing the urban community with key government and private sector services under one roof; therefore, citizens have to go to another center, such as the headquarters. This is not favourable to some older citizens (Table 8).

Table 8: Theme of Services, its subthemes, and related quotes

Subtheme	Quote
Fear of digitalized services	Implementation of those cashless payments, you know, people like me, my generation, there was no computer system yet, so we are fearful whether we put money correctly or not? Of course, there are people there to assist us, but I would prefer to pay cash.
	Maybe they want to be innovative, they go cashless, and then you see, hopefully, you people will comply, but you must understand many are still old. The old generation is still around.
	I think the next generation you go by cashless. I know it's good, it's convenient. We paid by card, those visa cards. I mean, you know the bank, debit card, not credit card. So if you accept, then it's all right.
Inconvenient Services	No, they have some departments that are not there. Let's say there is no TNB (<i>Tenaga Nasional Berhad</i> -a utility company) in UTC (<i>Urban Transformation Centre</i>), so I have no choice. I go to the post office for TNB matters. So things like that, I prefer other options.
	No, the Jabatan Pendaftaran Negera (National Registration Department) (at) their UTC (<i>Urban Transformation Centre</i>) unit is not complete; therefore, for certain things, we have to go to the HQ (headquarters).

4.5.4. Theme IV: Security

A secure community is one where residents feel safe in their homes, public spaces, and neighbourhoods. This often involves proactive measures such as community policing, neighbourhood watch programs, and initiatives to reduce crime rates. Some older citizens feel primarily safe in the city, but they feel it can be improved (Table 9).

Table 9: Theme of Security, its subthemes, and related quotes

Subtheme	Quote
Break-ins	No, nowadays, there are break-ins at most of the residents. Last time, when I was young, this was very safe. There were no drug addicts. No such things, but now, if you leave your house unattended, there will be break-ins.
Safe Neighbourhood	So far it is safe, but I don't dare go so early, about 7 o'clock I go walking. If you go early, you might be robbed, you know. You don't carry anything.
	I don't mind going alone because I walk slowly, whereas others walk very fast around my <i>taman</i> (neighbourhood). So you are slowing people down.

Security, I can say it's okay, but the police should make more rounds when they can. (Interviewer: So currently it's not adequate?) Not adequate.

CHAPTER 5: DOMAIN 2 - TRANSPORTATION

This chapter reports the findings from a viewpoint concerning the social amenities of transportation services required by the elderly. This includes the perspective of senior citizens and their caregivers regarding an age-friendly city in terms of transportation. The assessment also covered the perceived importance and accessibility of transportation in an age-friendly city in Ipoh.

5.1. Modes of transportation used by respondents

Table 10 shows the methods and frequency of transportation used by the elderly for daily tasks such as shopping, medical appointments, errands, and more. The majority of the respondents used a car as their primary mode of transportation (85.4%) followed by motorcycles (25.1%). Approximately 5.1% to 7.0% of respondents indicated a preference for utilizing taxi and e-hailing services for their travel, while only 2% opted for buses (public transport) for their daily commute.

Table 10: Modes of transportation used by respondents surveyed in the Ipoh City

Elements	n	%
Main transportation mode for daily activities (multiple choices)		
Car	906	85.39
Motorcycle	266	25.07
Taxi	54	5.09
e-hailing	74	6.97
Walking	19	1.79
Others	95	8.95
Cycling	16	1.51
Public transport (i.e. bus)	22	2.07
Van / lorry	2	0.19

5.2. Accessibility of transportation

The accessibility of criteria related to age-friendly transportation and street features was shown in table 11. Only 42.8% of respondents agreed with the notion that public transportation was conveniently accessible, while 48.4% expressed uncertainty regarding the affordability of such transport. Likewise, concerning the accessibility of public transportation to destinations such as hospitals, clinics, parks, shopping centers, banks, and other pivotal locations, respondents exhibited uncertainty (46.8%). Nevertheless, the majority of respondents (79.8%) demonstrated comprehension in interpreting and reading traffic signs. Moreover, the unavailability of designated parking spaces for the elderly in Ipoh city was a concern voiced by the majority of respondents (73.2%). Approximately one-third (38.5%) of respondents concurred with the implementation of audio/visual pedestrian crossings in public.

Table 11: Availability of the key elements in the transportation domain of an age-friendly city in Ipoh City's perspective (n=1059)

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Accessible and convenient public transportation	452	42.76	365	34.53	240	22.71	1057
Affordable public transportation	442	41.74	104	9.82	513	48.44	1059
Public transport provides access to destinations like hospitals, clinics, parks, shopping centers, banks and other key destinations.	461	43.53	102	9.63	496	46.84	1059
Easy to read traffic signs (eg. appropriate size, colour and font)	845	79.79	86	8.12	128	12.09	1059
Priority parking bays for elderly	130	12.28	775	73.18	154	14.54	1059
Audio / visual pedestrian crossings	408	38.53	463	43.72	188	17.75	1059

5.3. Perceived importance of the transportation

Table 12 shows the significance of essential components within the transportation domain of an age-friendly city designed for Ipoh city. Most of the respondents perceived that accessible and convenient public transportation is important. The majority (84.5%) of the elderly population held the perception that easily accessible and convenient public transportation holds significance. The majority (85.4%) also recognizes the significance of public transportation in enabling access to destinations such as hospitals, clinics, parks, shopping centres, banks, and other essential locations. Similarly, the majority of responses (84.2%) underscore affordability as a pivotal aspect. Virtually all participants demonstrated an awareness of the significance surrounding legible traffic signage (93.8%), dedicated parking spaces for the elderly (90.2%), and audio/visual pedestrian crossings (91.5%) tailored to their needs.

Table 12: Importance of the key elements in the transportation domain of an age-friendly city in Ipoh City's perspective (n=1059)

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Accessible and convenient public transportation	892	84.47	29	2.75	135	12.78	1056
Affordable public transportation	890	84.20	21	1.99	146	13.81	1057
Public transport provides access to destinations like hospitals, clinics, parks, shopping centers, banks and other key destinations.	903	85.43	18	1.70	136	12.87	1057
Easy to read traffic signs (eg. appropriate size, colour and font)	991	93.84	9	0.85	56	5.30	1056

Priority parking bays for elderly	954	90.17	32	3.02	72	6.81	1058
Audio / visual pedestrian crossings	967	91.49	15	1.42	75	7.10	1057

5.4. Gap score analysis for transportation domain

Overall, fifty percent of the respondents concurred that an evident gap exists within transportation services designed for the elderly demographic (Table 13). Thirty-seven percent of the respondents indicated a perceived deficiency in the city's transportation accessibility for the elderly. Furthermore, 39.5% of the respondents exhibited uncertainty (gap score 1) about the existence of affordable public transportation services for the elderly in Ipoh. Conversely, a significant majority (84.2%) of respondents held the perception that there is no significant gap in traffic and street signs, as these are already present within the city of Ipoh. Approximately 75.2% and 45.1% asserted the existence of other gaps, specifically the absence of crucial services like designated parking spaces and pedestrian facilities for the elderly.

Table 13: Gap analysis of the key elements in the transportation domain of an age-friendly city in Ipoh City's perspective (n=1059)

Elements	Valid responses	Gap analysis						Mean Percent (%)	
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap			
		n	%	n	%	n	%		
Accessible transportation	919	471	51.3	108	11.8	340	37.0	48.7	50.7
Affordable transportation	911	456	50.1	360	39.5	95	10.4	49.9	
Public transport	921	470	51.0	357	38.8	94	10.2	49.0	
Traffic signs	1001	843	84.2	76	7.6	82	8.2	15.8	
Parking bays	986	160	16.2	85	8.6	741	75.2	83.8	
Pedestrian	982	421	42.9	118	12.0	443	45.1	57.1	

5.5. Qualitative results

The respondent's experiences with utilizing public transportation in an age-friendly city in Ipoh City include both positive and negative experiences, along with suggestions for improving transportation services.

The experiences were categorized into three themes: (I) experiences using public transport, (II) experiences related to road infrastructure and (III) recommendations to improve transportation services.

5.5.1. Theme I: Experience using public transportation

The negative encounters shared by the respondents revealed instances where they had unfavourable experiences and expressed dissatisfaction with public transportation. Several individuals expressed concerns about the high cost of the fare and a lack of trust in the e-hailing driver due to perceived security issues. Some people also raised issues regarding the inconvenience and inaccessibility of public transport near their residential area (Table 14).

Table 14: Theme of experience using public transport

Subtheme	Quote
Safety concern of transportation	Even Grab, the e-hailing service, can be quite impolite. I became quite fearful; I worried that the driver might have been upset and could have taken me to a different location.
	No, because I typically travel with my husband; I don't usually travel alone. Therefore, I would recommend that those who do travel alone consider having companions.
Accessible public transportation	I wish to go back to the date when the bus travels through my residence area. Last time the bus travelled through the residency, the bus stop is still there.
Perceived unaffordable e-hailing services.	They suggest we use Grab, but it's not within our budget to do so. I mean, it's convenient, but it's not cost-effective. They charge a few dollars for the service. I might as well use that money for my meals throughout the day. They simply say, 'Just call Grab.' Is calling Grab really that easy? It also affects my finances.
	One thing is it's so expensive (the e-hailing service).
Disappointed with public bus schedules	I am quite disappointed. Oh, I don't know the schedule anymore; I lost faith, so I started using my motorbike.
Fear of public transportation	I don't know; I don't trust them; I feel scared (of the public transport).

5.5.2. Theme II: Experience towards road infrastructure

Negative experiences related to road infrastructure were also discussed, including inadequate parking bays for the elderly or parking areas that are not conveniently located near entrances. Some individuals also voiced concerns about the overhead bridge, noting that its steep stairs make it unsuitable for the elderly due to potential difficulties caused by less robust leg strength (Table 15).

Table 15: Theme of experience towards road infrastructure

Subtheme	Quote
Inadequate parking bays	There's no parking place over there because new buildings have been built everywhere; encroaching on the parking areas. So, there are no options for

	parking." New hospitals, specifically, have issues with parking areas. It's a problem all over the country, not just at Ipoh Hospital. They never seem to consider parking when designing or planning these hospitals.
Physically taxing overhead bridge	Yeah, of course, in areas with heavy traffic. The overhead bridge there is incredibly steep. They assume we still have strong legs, but that's not the case anymore, right? Who would want to walk or climb up there? So, I'm risking my life just to jaywalk.
Steep staircase	I know, I see the steps, it is quite steep, you know.

5.5.3. Theme III: Improvement of public transport

A suggestion has been put forward to reserve parking spaces designated for individuals with disabilities (OKU) near entrances, aiming to improve convenience and accessibility for older adults. They express a preference for the bus stop to be conveniently situated near residential areas. Additionally, they propose enhancing the traffic light system to assist elderly pedestrians by detecting common mobility aids like wheelchairs in real-time and extending crossing times (Table 16).

Table 16: Theme of improvement of public transport

Subtheme	Quote
Perceived need for special parking for older adults	Yes (special parking for senior citizens), indeed good for senior citizens.
Inconvenient bus stop location	Because for me I have to walk quite a distance to the bus stop up to the main road near the church. It's a bit of a hassle if I want to take public transport like the bus.
Inaccessible public transport	But you see, the public transport from the house to the main road is one connection. Who is going to help them? I have to walk 800 meters to the main road, and that is another factor to consider regarding the bus schedule and the bus routes within the residential area."
Perceived need for a convenient bus stop	I think I will take Grab to the bus stop. It's quite far from my house. I saw some elderly people there, and they could not drive. They don't have anyone to help them, so having a bus service is crucial for them. It's essential that the bus station is friendly and easily accessible for them to come back and that it's within a reasonable walking distance from their homes.
Improvement of traffic light	It's a bit fast; it's better to make it slower so that people have enough time to cross the road, especially the elderly who walk very slowly. We shouldn't expect them to run; that's very dangerous. I remember one time I rushed, and it was quite terrible. While I can run, not everyone can. It's a bit dangerous; we should allocate more time for them.

**Lack of maintenance
for pedestrian signal**

Some people have to press the button, but when they do, the button doesn't work because it's never maintained

CHAPTER 6: DOMAIN 3 – HOUSING

6.1. Needs of older adults for house modifications and renovations

The housing modifications that individuals commonly perceive as needs can be classified into four distinct domains. Firstly, the need for easier access into or within the home, such as the installation of ramps, chairlifts, elevators, or wider doorways. The findings suggest that a significant proportion (68.6%) of individuals expressed that they do not necessitate any adjustments to their housing. Only 16.9% showed their need for these modifications, indicating a preference for improved accessibility. Additionally, a notable proportion of individuals (14.5%) expressed irrelevant or uncertainty about the housing modifications.

Secondly, the modifications to the bathroom, including the installation of grab bars, handrails, higher toilets, or non-slip tiles. The majority of individuals (54.9%) indicated that these modifications are unnecessary. Conversely, 31.6% of individuals expressed the need for these modifications highlighting the importance of ensuring safety and convenience in bathrooms. Additionally, a small fraction of individuals (13.6%) found these modifications irrelevant or uncertain concerning their needs.

Thirdly, the preference for having a bedroom, bathroom, and kitchen on the first floor. Approximately, 38.6% of individuals indicate lack of preference for the associated modifications. A notable proportion of individuals (31.0%) expressed the need for this arrangement, indicating a desire for improved accessibility and convenience. Furthermore, a significant portion of individuals (30.4%) found this element irrelevant or uncertain to their preferences.

Lastly, the additional modifications are not specifically enumerated in the preceding categories. A significant fraction of individuals (10.1%) expressed that they do not require any additional adjustments to their housing. Only four individuals indicated a need for these additional modifications, which included the installation of a security alarm and floor flattening. Moreover, a few individuals (7.6%) considered this element irrelevant to their situation (Table 17).

Table 17: House modifications and renovations that are needed by seniors

Elements	n	%
Easier access into or within your home such as a ramp, chairlift or elevator, or wider doorways		
Yes	179	16.87
No	728	68.61
Not relevant	89	8.39
Not sure	65	6.13
Bathroom modification such as grab bars, handrails, a higher toilet or non-slip tiles		
Yes	335	31.57
No	582	54.85
Not relevant	85	8.01
Not sure	59	5.56

Putting a bedroom, bathroom and kitchen on the first floor		
Yes	329	31.01
No	410	38.64
Not relevant	270	25.45
Not sure	52	4.90
Other modifications		
Yes	4	0.38
No	107	10.08
Not relevant	81	7.63

6.2. Accessibility of housing features

A majority of older individuals (52.8%) indicate the availability of homes that are equipped with features, such as no-step entry, wider doorways, bedrooms and bathrooms on the first floor, and grab bars in bathrooms, that specifically cater to the elderly. A significant proportion of older adults (80.9%) are uncertain about or lack access to the affordable housing options associated with senior citizenship. Additionally, a considerable proportion of older adults (87.9%) believe that financial assistance for home modification or home purchasing is either lacking or uncertain (Table 18).

Table 18: Availability of the key elements in the housing domain of an age-friendly city in Ipoh City's perspective

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Homes that are equipped with features such as a no-step entry, wider doorways, first floor bedroom and bath, grab bars in bathrooms	560	52.83	284	26.79	216	20.38	1060
Affordable housing options for senior people	203	19.15	617	58.21	240	22.64	1060
Financial assistance for home modification / purchasing	128	12.09	621	58.64	310	29.27	1059

6.3. Perceived importance of the housing features

A majority of senior citizens (86.1%) expressed the importance of homes equipped with features like no-step entry, wider doorways, bedrooms and bathrooms on the first floor, and grab bars in bathrooms that are associated with senior living. A significant proportion of older adults (75.9%) believed that

affordable housing options were of the utmost importance for older individuals. Only 69.8% of older individuals considered financial assistance for home modification or home purchasing to be of utmost importance (Table 19).

Table 19: Importance of the key elements in the housing domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Homes that are equipped with features such as a no-step entry, wider doorways, first floor bedroom and bath, grab bars in bathrooms	911	86.11	79	7.47	68	6.43	1058
Affordable housing options for senior people	804	75.92	154	14.54	101	9.54	1059
Financial assistance for home modification / purchasing	737	69.79	195	18.47	124	11.74	1056

6.4. Gap score analysis for housing domain

The mean percentage gap score for housing modification needs, features, and financial assistance was 55.4%. In the analysis of gap scores for all elements among the individuals, it was found that the element with the highest gap score was access to the financial assistance associated with senior citizenship. Specifically, 16.8% of the individuals reported perceiving a gap score of 1, whereas 49.5% reported perceiving a gap score of 2 (Table 20).

Table 20: Gap analysis of the key elements in the housing domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)	
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap			
		n	%	n	%	n	%		
Features	990	630	63.6	117	11.8	243	24.5	36.4	55.4
Housing options	958	349	36.4	125	13.0	484	50.5	63.6	
Financial	932	314	33.7	157	16.8	461	49.5	66.3	

6.5. Qualitative results

Housing is crucial for seniors because it offers safety, security, independence, social connections, access to services, as well as overall comfort and quality of life. It allows older individuals to age in place, maintain their independence, and experience a meaningful and purposeful later life. The Themes that emerged from discussions with the older adults and caregivers include (I) house modification, (II) house features, (III) financial constraint, and (IV) house safety.

6.5.1. Theme I: House modification

House modification for older adults involves making changes or adaptations to a residential property to accommodate the specific needs and challenges faced by senior citizens. House modifications for the older adults include various adjustments and additions, such as the installation of grab bars in the bathroom, the replacement of a squatting toilet with a sitting one for convenience, the convenience of having a bathroom attached to the participant's room, making it easy for them to take a shower. Some older adults shared that these modifications improve the safety, accessibility, and comfort of the living environment for elderly individuals, allowing them to age in place and maintain their independence. Meanwhile, some older adults maintained a staircase and repainted the house (Table 21).

Table 21: Theme of house modification, its subthemes, and related quotes

Subtheme	Quote
Bathroom and toilet renovation	Yes, I have grab bars in the bathroom. I installed them because of my handicap, not for any other reason.
	We've modified it. We already have two toilet bowls downstairs and one bathroom. Most of my siblings have their own houses now, so there's no problem for us.
	You see, the house has two toilets. One is a sitting toilet, and one is a squatting toilet, so we demolished the squatting one and replaced it with a sitting toilet.
	It's very, very difficult for them to squat, so we will change it to sitting toilets. But this has to be done in all the homes where there are elderly people because squatting can be very difficult for them to get up from.
	My bathroom floor is quite okay; it's not slippery, but I don't have any fixtures. You know what I mean, right? Those rubber things they sometimes use to prevent slipping and all that. I don't have them, I don't know.
	Yes, she can. She's used to it because there's a bathroom attached to her room. She has a room to herself, and the bathroom is attached. She sits in the tub and takes her shower; it's easy for her.
	Yeah, yeah, we need to be friendly because every year we have a government inspection; once a year, the MOH (<i>Ministry of Health</i>) comes in, they inspect everything, go around, and make sure everything is in

	order. Of course, your toilet needs to be handicap-friendly; we need to have grab bars and everything. Maybe not enough for a wheelchair to get in, but a lot of things have to be in place; otherwise, we can't get the license, right?
	The toilet is okay, but I won't be able to squat for so long. A sitting toilet is preferable.
	Oh, the home has a wonderful attached bathroom. Just add a grab bar, and the patient can actually be independent without needing additional care and continue to stay at home.
Staircase	No, no, we don't have a staircase.
	Yeah, I can go up (to the second floor). I can manage it, but it's not the same as when we were young. We can go up, but we take it really slowly.
House maintenance	I wish I could have renovated it. I haven't been able to keep up with the general upkeep.

6.5.2. Theme II: House features

Most older adults expressed that they mainly prefer living in detached or double-story houses. Some individuals expressed the importance of having nearby amenities like mini markets and supermarkets. The older adults noted the absence of surveillance in their neighbourhood. Furthermore, some older adults appreciate well-maintained gardens and landscaping. Additionally, older adults prefer residing with family members or having companionship (Table 22).

Table 22: Theme of house features, its subthemes, and related quotes

Subtheme	Quote
Type of house	The house, oh yeah, I am staying in <i>Kampung Tersusun</i> (re-arranged village). It's a detached, double-story house. My house is a double-story house.
Home surveillance	Yes, but I've seen in other <i>taman</i> , you know, I saw the <i>RELA</i> (<i>the Malaysia Volunteers Corps Department, which is a paramilitary civil volunteer corps</i>) cabin. I don't know whether it belongs to that <i>taman</i> (neighborhood) or what, but definitely, our <i>taman</i> doesn't have it.
Convenience facilities	Usually, a mini market and nursery, and everything must be present there, you know. It doesn't have to be far, so it must be self-contained. I have both a mini market and a supermarket. If I don't want to go to Ipoh, I don't have to. For me, yes, yes, because I'm nearby even though it's not that flourishing in terms of those businesses, you know, but it's still within short (distance) drives. Convenience is still there. You cannot complain anymore. They say Kuala Lumpur now is very inconvenient.

	It's acceptable because we don't have an upstairs, and it's a single-story, so having the bathroom attached makes it convenient.
	Yeah, when we built the house, we had a kitchen inside the house, I mean, inside the middle. And then we noticed it was better to have my house quite spacious, so we had a place outside the house. So we shifted the kitchen out of the house, which means the kitchen will be separated from the main building or something like that.
Attractive environment	The social environment and the fact that they have a nice garden without having to take care of it, you see. So all the landscaping is nice.
Companions	Do they own their house independently? No, it's better to stay with somebody.
	No, but of course, I do have my mother, who is almost 90 years old. Then, I have my wife, a sister, and a daughter who's intellectually challenged.

6.5.3. Theme III: Financial constraint

One of the challenges that older people encounter in terms of their finances is the difficulty in acquiring a residential property due to a variety of different financial constraints. Some find it difficult to obtain bank loans, as banks often require surety or collateral. The house prices highlight the increasing cost of houses over time, making it challenging for older adults to afford suitable housing. The affordability of houses in the past and the recent price surge were highlighted. Additionally, some housing units require residents to pay a maintenance fee for monthly amenities and manage cleaning and maintenance independently (Table 23).

Table 23: Theme of financial constraint, its subthemes, and related quotes

Subtheme	Quote
Bank loan	Because, in the first place, the elderly won't qualify for a loan. Either they have their own savings, or they can't buy a house because no bank will lend to the elderly if they don't have any collateral or surety.
House price	The prices of houses are atrocious. In 2005, when I bought the house I'm staying in, it was a single-story Semi-D priced below 200K (thousands). However, nowadays, you can't find anything below 200K (thousands), even though I'm living outside of Ipoh, in Klebang. So, the question of whether the elderly can afford a house.
	The home, even before I got married, because we were both government servants. So, every month, we received our salaries, and we decided to buy a house by instalment. Of course, at that time, Ipoh Garden was very affordable. Now it costs 400K (thousands). I bought it for only 24K (thousands) in 1970 or 1969. It's hard to deny that, even though our pay was not much, we could afford to set aside money to pay off the installment within, I think, a few years, as we did.
	Hmm... if you want to buy a house here, next to my house, it's one

	hundred and nine thousand, but I bought it a long time ago, and when I was 40 years old, I bought that house cheap, but now it's expensive.
Maintenance fee	First, you must buy a unit, and the price varies based on the size. You can choose between 2-bedroom or 1-bedroom units. Additionally, you have to pay monthly fees based on the unit's size, with a minimum of about RM300 per month. You are responsible for your own transportation, food, and cleaning of your unit. You have to clean it yourself. On the other hand, if you have your own place, you don't have to pay the RM300 monthly fee. You can even hire a part-time maid who can come on a weekly basis, which is quite convenient now.

6.5.4. Theme IV: House safety

House safety for older adults is to establish a living environment that minimizes potential dangers and promotes the safety and well-being of older individuals in their homes. Older adults prefer gated and guarded communities, which are considered the best due to the added safety and security measures provided by developers. Some of the elderly mention features such as alarms and automatic gates that enhance house security. Auto gates are seen as a convenient addition to the property, providing ease of access and enhancing security. They also expressed the need for wider roads to facilitate smooth traffic flow and make it easier for residents to enter and exit the house community (Table 24).

Table 24: Theme of house safety, its subthemes, and related quotes

Subtheme	Quote
Gated and guarded	Of course, a gated and guarded community is the best. In terms of safety, the developer provides alarms, automatic gates, and all the facilities we need.
Auto gate	Oh, it's okay; we installed the electric gate when we renovated the house, haha.
Wider road	The road there must be very wide, that's what I say, not narrow, otherwise, it would be difficult for them to leave.

CHAPTER 7: DOMAIN 4 – SOCIAL PARTICIPATION, INCLUSION AND EDUCATIONAL OPPORTUNITIES

7.1. Educational activities participated by older adults

The results suggest that a significant proportion (76.8%) of older adults refrained from engaging in educational or self-improvement activities. Only one-fifth of the older adults engage in various educational or self-enhancement activities. The activities that individuals commonly engage in can be categorised into several domains. The majority of individuals (67.4%) participate in spiritual or religious activities. A significant portion (14.4%) of individuals pursue skill-based activities, aiming to develop and enhance their skills in specific areas. Some individuals (9.3%) seek to expand their knowledge and expertise in their preferred domains through various learning opportunities. Additionally, a notable proportion of individuals (8.4%) actively participate in community activities, contributing to the welfare and development of their communities. Lastly, a small fraction of individuals (1.4%) engage in work-related activities, which may involve professional development or occupational tasks. A subset of older population (3.7%) exhibits a lack of discernment when engaging in educational pursuits, demonstrating a willingness to participate in a wide range of activities as needed (Table 25).

Table 25: Educational activities participated by seniors

Elements	n	%
Involved in continuing education or self-improvement activities in the community		
Yes (multiple choice)	215	20.26
- Spiritual / religious	145	67.44
- Community services	18	8.37
- Skills	31	14.42
- Work / business	3	1.40
- Enhance knowledge on preferred topics	20	9.30
- Not selective (almost anything when required)	8	3.72
No	815	76.81
Not sure	31	2.92

7.2. Availability of social opportunities

A significant proportion of older adults (71.8%) expresses uncertainty or lack of access to the privileges associated with senior citizenship, particularly in the realm of entertainment. These privileges encompass various benefits such as discounts, special initiatives, and devoted waiting lines.

Approximately 66.8% of respondents indicate that the availability of a convenient location for entertainment is either lacking or uncertain. A majority of older individuals (51.8%) recognise the existence of diverse cultural activities, such as festivals and spiritual events, that specifically cater to the older population. A considerable proportion of older adults (73.5%) believes that the availability of accessible social clubs dedicated to activities such as reading, gardening, crafts, or hobbies is either lacking or uncertain (Table 26).

Table 26: Availability of the key elements in the social participation, inclusion, and educational opportunities domain of an age-friendly city in Ipoh City's perspective

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Privilege for senior citizens for entertainment (eg. discount, special program, no queue, etc.)	298	28.17	406	38.37	354	33.46	1058
Conveniently located venues for entertainment	351	33.18	297	28.07	410	38.75	1058
A variety of cultural celebration (festivals, spiritual events, etc.) involving older adults in the multiracial populations	547	51.80	364	34.47	145	13.73	1056
Social clubs for books, gardening, crafts or hobbies	280	26.49	506	47.87	271	25.64	1057

7.3. Perceived importance of social inclusion

A majority of senior citizens (56.4%) expressed the importance of having the privileges that are associated with senior citizenship. Only 42.3% of older people considered the presence of conveniently accessible entertainment establishments to be of utmost importance. A significant proportion of the senior citizen population (76.8%) expressed that active participation in diverse cultural celebrations was of utmost importance for older individuals. Only 47.3% of older people considered the establishment of a social club for engaging in various activities to be of utmost importance (Table 27).

Table 27: Importance of the key elements in the social participation, inclusion, and educational opportunities domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Privilege for senior citizens for	596	56.44	307	29.07	153	14.49	1056

entertainment (eg. discount, special program, no queue, etc.)								
Conveniently located venues for entertainment	447	42.29	415	39.26	195	18.45		1057
A variety of cultural celebration (festivals, spiritual events, etc.) involving older adults in the multiracial populations	811	76.80	147	13.92	98	9.28		1056
Social clubs for books, gardening, crafts or hobbies	499	47.25	376	35.61	181	17.14		1056

7.4. Gap score analysis for social participation, inclusion, and educational opportunities domain

The mean percent gap score for social participation, inclusion, and educational opportunities was found to be 27.9%. Based on the analysis of gap scores for all elements among the respondents, it was found that the element with the highest gap score was access to the privileges associated with senior citizenship. In particular, 10.1% of the respondents reported perceiving a gap score of 1, whereas 24.7% reported perceiving a gap score of 2 (Table 28).

Table 28: Gap analysis of the key elements in the social participation, inclusion, and educational opportunities domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap		
		n	%	n	%	n	%	
Privilege entertainment	902	588	65.2	91	10.1	223	24.7	34.8
Location entertainment	862	703	81.6	62	7.2	97	11.3	18.4
Cultural celebration	955	670	70.2	29	3.0	256	26.8	29.8
Social clubs	872	625	71.7	62	7.1	185	21.2	28.3

7.5. Qualitative results

Seniors' continuous social integration and ability to stay informed and involved are important. Social participation among the senior communities can occur through participating in recreational, social, cultural, and spiritual events. Themes that emerged from the older adults and caregivers include (I) social engagement, (II) religious, cultural and spiritual activities, (III) infrastructure, transportation and funding, (IV) social interaction, (V) community services, and (VII) entertainment.

7.5.1. Theme I: Social engagement

Social engagement is an individual's level of participation and communication with the community. Social engagement among the older adults was identified, ranging from being inactive to being actively involved in social activities. Some of the older adults revealed that they were not active in socializing; the reasons were a lack of ability to socialize, lack of activities in the neighbourhood, physical limitations, and being occupied with work or house chores.

Meanwhile, some older adults maintained their social lives through telephone communication, outings, and exercising. A higher level of social engagement includes participating in social clubs and hobbies classes. Joining motivational classes and once-a-week meetings among the senior citizens were social activities of the older adults at the community levels (Table 29).

Table 29: Theme of social engagement, its subthemes, and related quotes

Subtheme	Quote
Being socially inactive	No, no ... I am not (active in social activities). So far, I'm not good at (social activities) ... not active in socializing.
	It's normal (social activities) here because it's near my neighbourhood because ... a lot of (them) work as ... government services, a lot of them staying nearby, my neighbours are doctors, nurses ..., that area is indeed ... yes, indeed there are no activities, there are only activities at each house.
	In fact, there are a lot of house chores too, those (works) that are not done yet, when we retire... we used to be full-time service, so... there are pending jobs, outstanding jobs we have to finish them, right, there's a lot of work ... House maintenance, ha-ha (laugh). Build the roof, after that, cable extension, change (electronic) meters, all that...
	No, no, because I take care of the kids (as a babysitter), not joining anything. It's just that I have planted flowers. Look at the flowers in the morning and evening; there is time to see them.
Physical limitation	Join team, many of them (make) effort may join a meeting you know but cannot bears sitting for long hours also sometimes. Yeah, these are the things.
Telephone communication	Yeah, they talked among themselves; maybe they can contact (my mother) through a handphone, and they have phone numbers, as my mother is holding her phone. She will call her friend. She can (make) the

	simple one simple call and receive. Not the smartphone; the smartphone cannot (A family caregiver of the older adult).
Outings	You know she'll say that we want to go by the reasons you know they, they will want to buy some biscuits and all these things. So, we take them, OK... It's like then. We follow la. We hire (a) taxi. Or yeah, yeah, taxi guy, uh. That guy will go and buy. These people will just be in the car. At least it's an outing for them. You know it is an outing for them.
Exercises	If (I'm) able, OK, if someone does it (house chores). If, usually, (I) have time, I jog in the morning.
Social clubs	Yeah, yeah, every day, every morning, because I go to the club every morning with my husband.
Hobbies classes	Cooking class? If a cooking class can. Maybe they have some demonstrations to teach them how to cook only. But if you ask them to cook, they are in wheelchairs; maybe the majority of them cannot stand for long, so how to cook? So maybe we can teach them this is simple food you learn. If you want, you go back and tell the children you want this, teach them to cook this (A family caregiver of the older adult)
Community activities	It's been a lot (of activities), sometimes events, talks, motivations, yes, we have joined. As of now, there is nothing (of activities) ... just like my fellow senior citizens, sometimes there is an association, meet once a week, chat about something, right? Before COVID, that was meeting friends, organizing wedding ceremonies, working together in communities...

7.5.2. Theme II: Religious, cultural and spiritual activities

Most older adults expressed that they mainly involved themselves in religious and spiritual activities when asked about their social lives. Some participated in society for their religious activities; meanwhile, some performed their religious activities at home, especially during the pandemic. Even though some older adults had their prayers at home, they interacted with others by inviting religious teachers and friends to gather at home for religious activities. At the organization level, the older adults were gathered for religious activities as informed by a voluntary caregiver working at the non-government organization center for older adults (Table 30).

Table 30: Theme of religious, cultural and spiritual activities, its subthemes, and related quotes

Subtheme	Quote
Religious society	I have got a religious society...
Religious activities	Not much (of religious activities), actually. I'm a Buddhist, so I used to go to the temple again. Now we can't go anymore (due to COVID-19). I'm fine and all those... I got to pray now; all I pray at home. (Regarding) religious activities, I am not very active, but I do my prayers at home. There are... sometimes (religious activities), (such as) reading Yasin (Yaseen), studying, the Ustazah (religious teacher) comes to the house,

if like us, we want to invite the Ustazah, friends come (to our house).

Devotional songs (for) about one hour I see about 8:00 to 9:00 (A voluntary caregiver of older adults at a non-government center).

7.5.3. Theme III: Infrastructure, transportation and funding

The social participation structures among older adults required the basic features of infrastructure, transportation and funding. A common place for gathering senior citizens for leisure activities, meetings, and chit-chatting was deemed a basic need for social participation raised by the adults and family caregivers. The common place for gatherings was perceived as important emotional and social support for older adults. Of note, the commonplace should be a center or a park located at the neighbourhood level instead of the state level. The location is important to older adults who experience physical limitations for long-distance traveling, as identified by family caregivers. Similarly, some of the older adults expressed difficulties accessing the location on the upper floors that required them to climb staircases, which hindered them from participating in social activities.

Besides infrastructure, transportation barriers for older adults were raised by a family caregiver. The older adults had limited transportation mediums, resulting in limited traveling destinations due to the age-limit policy of the transportation companies.

Financial constraints were faced by some older adults when conducting social activities that had limited their choices, for instance, a more accessible location. The funding sources were from their own pockets, the members, or the public (Table 31).

Table 31: Theme of Infrastructure, transportation and funding, its subthemes, and related quotes

Subtheme	Quote
A centre for socializing	Uh, maybe, uh, let's say a place where they can go there (a place) and chit chatted, and you play Mahjong (a tile-based game).
	For people to sit down and share or maybe you bring your own coffee, then drink after your friends and when we see other people. Just say good morning, good morning, good morning, and then just walk off.
	Senior citizens, sometimes, we can have a meeting, we can exchange opinions, and meeting with elderly people is also possible.
	But sometimes, I told you, I feel that the government should do something for the elderly. Let's say have some place for them so they can mingle around with all the old folks, not every day, of course. They want a weekend; OK, we can send them for maybe one hour or two hours, so they can enjoy the time there because old people like to talk to each other. They talk about things; they have their conversation, I feel, unlike younger people. They prefer to; maybe they talk about her lifestyle, how they all the things. In younger days, they will talk like that, you know (A family caregiver of the older adult)
	They won't have people to talk to them, you know. They want people to talk to them. Maybe at the center, they have some people to advise

	them.
Accessible location	That's why I hope the government will do something, maybe center, park nearby, not one state, one center. It's significant for them to travel also, you know. That's what I want (A family caregiver of the older adult) Well, the location of my office is my son over there; I don't get a good location, so mine is, you know, you have to climb up these stairs, so there are some people over there. (They were) with me earlier, but then they left out. This is sorry, they cannot climb up the stairs to your problem.
Neighbourhood Environmental Design	In front (of our house), sometimes the police always patrol in front of my house, is it a big road... There are always people passing by, right? Here, it is not quiet.
Transportation barriers	Cannot, even now, if I want to travel overseas, they won't sell (the) ticket to my mother (of a caregiver). By air cannot, by car can... By air, they won't sell the ticket because they won't want to take the risk. At the moment, she can travel by car, but by air (she) cannot. (Interviewer: So, you would also choose those destinations that can go by car, right?) Yes.
Funding	Yeah...because downstairs, which is expensive. It is expensive to rent, so at the moment, we are renting a place upstairs which is a little bit cheaper for our organization. Financial. We don't have enough. We (need to) have more funds around... But limitations are funding...No, not at the moment we are. We are getting it from the public. Okay, the source of funds (is) ourselves. Some more members. We run the society.

7.5.4. Theme IV: Social interaction

Social interaction involves the process of reciprocal influencing among one another at the individual or group level during social encounters. Some older adults deemed that participation in a society mainly involved the same age group population; in their opinion, the majority were senior citizens. The older adults would like to interact with the younger generation; however, youngsters' involvement in societal activities was lacking. In contrast, some older adults managed to have social interaction with all age groups. Senior citizens residing at older adult care centers organized by NGOs had their planned routine interaction as a group (Table 32).

Table 32: Theme of social interaction, its subthemes, and related quotes

Subtheme	Quote
Lack youngster involvement	In the society, I'm OK; I mean, yeah, most of us, 90% of us are all elderly people.
	Yeah, yeah, that's the young generations are not willing to take up the job, so we are doing it. You're forced to deal with (it).

	They (the youngsters) have no time. Basically, if you are thinking of, you know, helping your community, helping the people in all they don't have time. They don't have time. They don't have extra time, and although they are very ... much oriented towards chasing money.
Involvement of all age groups	... there are... There are (involvement) multi-ages, various ages, levels... elementary school, high school, working and retired, all are there (for activities).
Group interaction	Then, we take them out to the compound. Then, give some exercise and all this, you know, and sing-along sessions, some games. So, we had this kind of activity. Yes, it's very boring to be cooped up within the four walls (for) 24 hours. (A voluntary caregiver of older adults at a non-government center)

7.5.5. Theme V: Community services

The activities of community services identified among the older adults were visiting schools and houses to provide help for people in need. Time factors did not constrain the older adults performing these services. They were motivated to engage in social services because they did good deeds for the community and those needing them for their knowledge and experiences (Table 33).

Table 33: Theme of community services, its subthemes, and related quotes

Subtheme	Quote
Activities	We go to school. We are going to teach (the students) some knowledge. Yeah, this is a main thing, (and) then we ... help them. The poor people, really poor, downtrodden people over there. The funds will help them. Just like recently, the last one or two years were very difficult years.
	And then we come across some people over there very downtrodden. Their thing when we go to the house, which we can help them. That's a little bit bigger... Yeah, I will go visit houses. Then, and then, this other thing. Nicely done... Yeah, volunteer, volunteer...
Time factor	Time, time, time. No, no, time, (is) not really a constraint here.
Motivation	This type of society is where we are doing a lot of goodwill service to the community and all that.
	I see a lot of people need help. Out there, a lot of people need our help, so with our knowledge, with our experience, and I think they ... come to us. They come to us. They say that we can help them out, so they come (to us), and that's what motivates (us).

7.5.6. Theme VI: Entertainment

The older adults perceived entertainment as an important social activity and a form of interaction with others, especially with their family members. The entertainment mentioned by the older adults primarily involves audio-visual entertainment, watching movies at the theatres or watching videos via social

media platforms. The older adults at the NGO Senior Care Centre had the privilege to enjoy various entertainment sponsored by the private sector or the general public. They were invited to food and entertainment functions outside the NGO senior care center (Table 34).

Table 34: Theme of entertainment, its subthemes, and related quotes

Subtheme	Quote
Perceived important	I think (entertainment is) very important; at least they got some entertainment, but let's say, like myself, you know I don't want to watch a movie, but I watch XXX (online video sharing and social media platform). XXX, I will watch, let's say, that news from what places, as you know, from Taiwan, they send me the news from the whole world like China or whatever, America, what, what all these things (are) nice.
Family interaction	But actually, once in a while, I think yes, they had to go out with the family members or things they go down, go to theatres and all that. It's good to have some entertainment.
Availabilities	Movies and all that are already there now.
Privilege entertainment	<p>Yeah, we get a lot of actually being there a lot of. We've got a lot of functions organized by other organizations you know outside, like shopping companies and this function, then they invite then only will invite our residents, go for the party and all that yes. Oh, we get a lot. You know, before the COVID (COVID-19). Before that, there will always be many functions and our residents. You know, yeah, so lucky to go...</p> <p>So, we get a lot of attention actually (from) the public. They call you already for <i>makan</i> (eating), and the residents (older adults) are very happy.</p>

CHAPTER 8: DOMAIN 5 - VOLUNTEERING AND CIVIC ENGAGEMENT

8.1. Availability of volunteer and civic engagement opportunities

A significant portion of the older adult population (74.0%) appears to lack awareness of the presence of volunteer opportunities tailored to their age group within the community. Likewise, a substantial majority of senior citizens (66.8%) seem to be unaware of the existence of opportunities for their active participation in decision-making processes within the community, such as engagement in community councils or committees where they could contribute their valuable expertise and insights (Table 35).

Table 35: Availability of the key elements in the volunteer and civic engagement domain of an age-friendly city in Ipoh City's perspective

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
A range of volunteer activities to choose from for elderly	275	25.99	529	50.00	254	24.01	1058
Opportunities for older adults to participate in decision making bodies such as community councils or committees (eg. giving expert opinion)	351	33.18	460	43.48	247	23.35	1058

8.2. Perceived importance of volunteer and civic engagement opportunities

A significant portion of the senior respondents, comprising 46.6%, recognized the importance of having a diverse range of volunteer activities tailored to the elderly population. However, a notable 14.9% of these respondents expressed uncertainty regarding the significance of such volunteer opportunities for older adults. It's noteworthy that a significant portion of the senior citizen demographic, nearly half (50.1%), emphasized the importance of offering a wide array of opportunities for older adults to engage in decision-making processes, particularly within community councils or committees. This participation is as a means to leverage their wealth of expertise and experiences acquired during their previous careers in the labour market (Table 36).

Table 36: Importance of the key elements in the volunteer and civic engagement domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important	Perceived not important	Unsure	Total responses
----------	---------------------	-------------------------	--------	-----------------

	n	%	n	%	n	%	n
A range of volunteer activities to choose from for elderly	493	46.60	407	38.47	158	14.93	1058
Opportunities for older adults to participate in decision making bodies such as community councils or committees (eg. giving expert opinion)	529	50.09	378	35.80	149	14.11	1056

8.3. Gap score analysis for volunteer and civic engagement domain

The mean percent gap score between the availability and importance of diverse elderly volunteer activity options and elderly participation in decision-making was 23.7%. Among the senior citizen respondents, a significant proportion, accounting for 26.1%, indicated that they perceive a noticeable gap between the availability and the importance of offering a wide range of volunteer activities tailored to the elderly within the community. Similarly, 21.3% of the elderly respondents expressed their perception of a gap in opportunities for their involvement in decision-making processes, reflecting their capabilities and expertise (Table 37).

Table 37: Gap analysis of the key elements in the volunteer and civic engagement domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap		
		n	%	n	%	n	%	
Volunteer activities	900	665	73.9	66	7.3	169	18.8	26.1
Decision making	905	712	78.7	57	6.3	136	15.0	21.3
								23.7

8.4. Qualitative results

Diverse elderly volunteer activities and participation in decision-making are essential for seniors, driven by voluntary involvement and the need for sufficient human resources. They promote voluntary engagement, allowing seniors to participate on their terms. This autonomy fosters social connections, mental agility, and a sense of purpose, combating isolation and enriching their lives. As more individuals express interest in joining these initiatives, ensuring sufficient human resources becomes crucial. Seniors' expertise and involvement benefit both their well-being and communities. This collective effort strengthens decision-making and bridges generational gaps, promoting understanding

and cooperation. Ultimately, these opportunities empower seniors to lead fulfilling lives, contributing their wealth of knowledge while welcoming new members into a supportive, active aging environment (Table 38).

8.4.1. Theme I: Voluntary services

Table 38: Theme of voluntary services, its subthemes, and related quotes

Subtheme	Quote
Voluntary involvement	Yeah, I joined as a volunteer.
Sufficient human resources	We have more people willing to join us, more people willing to come.

CHAPTER 9: DOMAIN 6 – CIVIC PARTICIPATION AND EMPLOYMENT

9.1. Employment status, sources of income and intention to work

The results indicated that a majority (54.3%) of the participants were in a state of retirement. Only 18.5% were still working, either employed or self-employed. The primary source of income for older persons predominantly derived from familial support (44.3%), followed by pension funds (34.1%) and personal employment income (16.5%). The majority of older persons (76.3%) had no intention of working, and only 21.7% of them were willing to continue working (Table 39).

Table 39: Employment status, sources of income and intention to work

Elements	n	%
Current employment status		
Employed	65	6.13
Retired / pensioner	576	54.29
Self-employed (including babysitting grandchildren)	131	12.35
Unemployed	289	27.24
Sources of income (multiple choices)		
None	91	8.58
Own salary	175	16.49
Family members	470	44.30
Welfare	42	3.96
Pension	362	34.12
Others [saving / Employees Provident Fund (EPF)]	26	2.45
Intention to continue to work for as long as possible		
Yes	230	21.68
No	809	76.25
Not sure	22	2.07

9.2. Availability of civic participation and employment

Among a total of 1059 respondents, a considerable 61.0% of the respondents perceived that there was a lack of a range of flexible job opportunities for older adults. On the other hand, 20.2% perceived that such opportunities were available in Ipoh city, while another 199 (18.8%) was unsure about this (Table 40).

Table 40: Availability of the key elements in the civic participation and employment domain of an age-friendly city in Ipoh City's perspective

Elements	Available	Not available	Unsure	Total responses
----------	-----------	---------------	--------	-----------------

	n	%	n	%	n	%	n
A range of flexible job opportunities for older adults (eg. part-time)	214	20.21	646	61.00	199	18.79	1059

9.3. Perceived importance of civic participation and employment opportunities

Out of a total of 1,059 respondents surveyed, more than half of the respondents (54.7%) perceived that a range of flexible job opportunities for older adults is important in an age-friendly city. However, 36.7% of the surveyed older adults felt that this was not important, while 8.6% of the respondents were unsure of its importance (Table 41).

Table 41: Importance of the key elements in the civic participation and employment domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
A range of flexible job opportunities for older adults (eg. part-time)	579	54.67	389	36.73	91	8.59	1059

9.4. Gap score analysis for civic participation and employment domain

The mean percent gap score for job opportunities was found to be 40.8%. In particular, 6.6% of the respondents reported perceiving a gap score of 1, whereas 34.2% reported perceiving a gap score of 2 (Table 42).

Table 42: Gap analysis of the key elements in the civic participation and employment domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)	
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap			
		n	%	n	%	n	%		
Flexible job	968	573	59.2	64	6.6	331	34.2	40.8	40.8

9.5. Qualitative results

Job opportunities hold a crucial significance for older adults in Ipoh, contributing to both individual well-being and the broader community dynamics. Themes that emerged from the older adults and caregivers include (I) job characteristics, (II) part-time job opportunities and (III) retirement plans.

9.5.1. Theme I: Job characteristics

Job characteristics are specific attributes, features, and elements that define and describe a particular job or role, encompassing aspects such as the tasks involved, responsibilities, skill requirements, working conditions, and other distinctive qualities that distinguish one job from another.

Job characteristics requirement among the older adults was identified, ranging from being flexible and balanced to limitations and restrictions in carrying out job duties. Some of the older adults revealed that they were willing and able to participate in flexible jobs. At the same time, some mentioned that they were physically not capable of carrying out some heavier duties (Table 43).

Table 43: Theme of job characteristics, its subthemes, and related quotes

Subtheme	Quote
Flexible job	No, no, no. This is not fixed. When I plumber, when my customer calls. I will go and check first, (and) then, of course, then I will know what to do. Then I will call. I've got my assistance then I will get them along and get the work done.
	Personally, even, for example, as a working parent, I want to just work 3 days a week, but we are in a very rigid system that you should come if you punch in and punch out at that time, even if you add a word and play Google and no one cares, so it's not output driven, it is all about just making sure your attendance is taken.
Job limitation	(I am) not a consultant, actually, but I can't (work) physically. I can't work already. But I can drive. I can drive and all that. Of course, I will assist them. Uh, I can't work much, but the major part of the work will be done by my assistance.
Working culture	So we talk about if you look at Ikigai that is the uh, it's the principle of life in a part of Japan where you have a lot of much older person in that part of Japan so the principle is Ikigai that so if you need to have a balance and in Ikigai is basically you do what you like, that's not good enough because you need to eat you do what you like, but you're paid for what you do, and then once your payload also you are doing something which is contributing to the community, and if the balance is there then you achieve Ikigai it's like a form of successful aging that so.
Insufficient opportunities	There are certain jobs over there the younger girl doesn't want to do. Then, I think about those types of jobs. You can ask elderly people to do

	it. No, there is no such opportunity here in this country now. There is none.
--	---

9.5.2. Theme II: Part-time job opportunities

Most older adults expressed that there was a lack of part-time job opportunities. Some felt that it was essential to have part-time job opportunities for those older adults who were financially tight and required some job to support their daily needs. Respondents also elaborated on the types of part-time jobs that they were interested in after retirement, for example, providing tuition. Respondents also mentioned that it was essential to keep one occupied by being involved in a part-time job to stay mentally active (Table 44).

Table 44: Theme of part-time job, its subthemes, and related quotes

Subtheme	Quote
Lack of opportunities	Uh, what's a job opportunity? I mean, for old people, there's nothing much, isn't it?
Job opportunities for those needy	Of course, of course, yes (job opportunity is important). Because I know one lady who's not (stay) near my place that I met her a few times when she goes to the coffee shop. She's quite old now. She goes to the coffee shop and washed the glasses, so she said they gave her RM30 a day. Then, for breakfast, they give her bread and coffee. She is quite happy because she goes there until 2 o'clock every day and gets RM 30.
Job after retirement	Actually, after my pension, after I retire, I also gave tuition in Math, then after that, when I had grandchildren, I wanted to see them more often nowadays because (need to travel to) KL Singapore, so I gave up my tuition. In actual work, because I used to work in Production Engineering, ah... Production Engineering, I've retired, and there's no replacement; whatever issues, they will call back. I can charge them, haha (laugh)
Physical limitation	When I was younger, there were many people I took care of, around 4-5 people, but now that I'm older, I only take care of 1-2 people. Even then, I can't handle it very well, but because there's no one else to look after them, I do it. Taking care of babies or those under 1-year-old is especially challenging; I can't manage it anymore. It's exhausting, and sometimes I feel tired and have body aches. That's how it is, but in a year or two, I won't be able to do it anymore.
Keep working due to interest	The interests are because if you don't keep on with your work or you get, you tend to forget.
Prefer part-time job	It depends on what kind of work, because age-wise we are not in our 30's, 40's, we are not so energetic anymore, maybe for a few hours we can work, we cannot stand for too long you know, last time can lah but now cannot, we will collapse you know, for a few hours still can, like 4 hours like that. Maybe those that don't need to stand so long, like maybe counter work, cashiers, so most of the time you would be sitting.

9.5.3. Theme III: Retirement plan

A retirement plan is a comprehensive financial strategy designed to provide individuals with a stable and secure source of income during their retirement years. It is crucial for older adults as it serves as a means to achieve financial independence and maintain their desired lifestyle after they cease regular employment. Retirement plans typically encompass various elements, including savings, investments, pension plans, and Social Security benefits, all of which work together to ensure financial stability during retirement.

However, older adults often have concerns related to their retirement plans. They worry about outliving their savings, the rising cost of healthcare, inflation eroding their purchasing power, and the ability to maintain their desired standard of living.

During the interviews, several respondents indicated that they had no intention of pursuing continued employment as they had already begun receiving pension benefits to support their livelihood. These individuals expressed a preference for a peaceful and relaxed lifestyle following retirement, expressing satisfaction with this choice. They emphasized their desire to avoid adding unnecessary stress to their lives during their golden years, recognizing the challenges that can come with aging. Nevertheless, their decision did not signify a complete absence of activities; rather, they sought a balance, engaging in leisure pursuits and pastimes to enjoy their retirement to the fullest (Table 45).

Table 45: Theme of retirement plan, its subthemes, and related quotes

Subtheme	Quote
<p>Stop working</p>	<p>So far, because my area is Ipoh Garden, there are quite okay people staying here, so I don't think so. Anybody wants to go to work, but they are so happy with their retirement ... Everybody is so happy to retire. So they don't think of getting another job now. Anyway, we don't need, I don't think we need a job.</p>
	<p>I feel like I can't handle it anymore. Sometimes, my knees hurt, you know? (Interview: Oh...) Yes, my children have told me to 'just rest, Mom,' they say, 'you don't need to do anything more than eat.' Haha</p>
	<p>I don't want to work anymore. I don't even want to take care of my grandchildren. (Interview: Oh, why is that?) Because during our golden years, we want ... we can't have too many activities, it's bothersome. Ah, it's bothersome, I like (inaudible), I want to relax, I don't want to think, because in the past, I had to take care of so many things—children, husband, work, and now I don't want to.</p>
<p>Pastime and hobbies</p>	<p>Last time, every morning, I went with my husband to swim in the mornings from 7 to 8. So if we have a group of swimmers, our friends go there to eat sometimes, so it's easier to pass the time. But right now, with the, you know, the pool, they opened the pool, but then the changing room is closed, so I said yeah, how to go there and swim. So, actually, we are quite active in that sense. Because the club has a lot of facilities, they've got a gym, tennis, squash and all so there is going to be friends there and meet a lot of people.</p>

CHAPTER 10: DOMAIN 7 - COMMUNICATION AND INFORMATION

10.1. Internet access and mode of interaction

The most common mode of communication among the senior citizen population in Ipoh is via telephone, accounting for 90.4% of interactions. Face-to-face communication follows at a rate of 31.6%, while social media is used by 24% of individuals. Email communication is less frequent, representing only 0.9% of interactions, with other modes of communication accounting for a minimal 0.1%. Given the vast amount of information that is disseminated on the internet, it is crucial to ascertain the extent of access to the internet among senior citizens. Approximately 49.1% of the older adult population had an accessible internet connection, whereas 24.8% of this age group lacked familiarity with smart devices or computers. Furthermore, 26.1% of elderly individuals did not have access to the internet. Majority of the older adults used the internet for social interaction (88.9%), followed by obtaining news updates (6.1%) and educational purposes (6%). An estimated 0.8 percent of older adults use the internet for work-related purposes, 4.8% for leisure or gaming, 1% for online transactions and billing, and 1% for service procurement.

Table 46: Internet access and mode of interaction by survey respondents in Ipoh City

Elements	n	%
Access the Internet		
Yes (multiple choice)	521	49.10
- Social interaction / communication	463	88.87
- Work / business	4	0.77
- Educational aspects (learning / skills)	31	5.95
- Entertainment & gaming	25	4.80
- Billing and transactions	5	0.96
- Services (purchasing / transportation)	5	0.96
- News updates	32	6.14
Not familiar with smart devices or computers	263	24.79
No	277	26.11
Mode of interaction in the community (multiple choices)		
- Phone	959	90.39
- Email	10	0.94
- Face-to-face	335	31.57
- Social media	254	23.94
- Others (via letter)	1	0.09

10.2. Availability of community information

A majority of respondents (65.9%) reported the availability of official written information that has been adapted to meet the specific needs of senior individuals, such as using a larger font size. Furthermore, a significant proportion (51.8%) noted that this information is accessible in many languages. Furthermore, telephone operator services have been tailored to accommodate the specific requirements of older individuals, such as providing instructions at a slower pace (58.6%). However, a significant proportion of older people (80.2%) reported lacking access to computers and the Internet at public venues such as libraries, senior centres, or government facilities, or expressed uncertainty over their access to these resources.

Table 47: Availability of key elements in the communication and information domain of an age-friendly city in Ipoh City's perspective

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Official, written information (e.g.: forms, brochures) adapted to the needs of seniors (e.g. Large font size)	698	65.91	246	23.23	115	10.86	1059
Telephone operator services adapted to the needs of seniors (e.g.: instructions are given slowly)	621	58.64	166	15.68	272	25.68	1059
Free access to computers and the Internet in public places such as the library, centers or government buildings	210	19.85	423	39.98	425	40.17	1058
Information (e.g. flyers, maps, others) that is available in a number of different languages	546	51.75	371	35.17	138	13.08	1055

10.3. Perceived importance of communication and information

Written material that is tailored to the requirements of the older people, according to 89.9% of older individuals, is the most crucial component, followed by availability in many languages (85.2%). Additionally, according to 84.5% of older adults, telephone operator services that have been tailored to meet the needs of older people are essential. A majority of seniors, comprising 61.2% of respondents,

express their opinion that ensuring availability of computers and Internet connectivity at public facilities is of significant importance.

Table 48: Importance of key elements in the communication and information domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Official, written information (e.g.: forms, brochures) adapted to the needs of seniors (e.g. Large font size)	952	89.90	34	3.21	73	6.89	1059
Telephone operator services adapted to the needs of seniors (e.g.: instructions are given slowly)	894	84.50	25	2.36	139	13.14	1058
Free access to computers and the Internet in public places such as the library, centers or government buildings	647	61.21	215	20.34	195	18.45	1057
Information (e.g. flyers, maps, others) that is available in a number of different languages	895	85.16	72	6.85	84	7.99	1051

10.4. Gap score analysis for communication and information domain

The mean percent gap for communication and information is 37.2%. A majority of the participants (52.4%) indicated that they encountered the most significant disparity in acquiring free access to computers and the internet. Specifically, 18.5% of the respondents reported a perceived gap score of 1, while 33.9% reported a perceived gap score of 2.

Table 49: Gap analysis of key elements in the communication and information domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)	
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap			
		n	%	n	%	n	%		
Written information	987	714	72.3	56	5.7	217	22.0	27.7	37.2

Telephone operator	919	639	69.5	136	14.8	144	15.7	30.5
Free computers	861	410	47.6	159	18.5	292	33.9	52.4
Internet								
Information different languages	963	595	61.8	60	6.2	308	32.0	38.2

10.5. Qualitative results

Keeping in touch with others and updating oneself with information are the key aspects of healthy aging. Communication and information are identified as a domain to meet the requirements of an aged-friendly city. This domain can be dissected into several angles, including (I) method of communication, (II) source of information, (III) positive attitude toward the internet, (IV) barriers to going online, (V) Digital infrastructure, and (VI) skill training and support.

10.5.1. Theme I: Methods of communication

There were various methods of communication used by the older adults. The older adult community did not limit themselves to using the telephone as a manner of communication. They have been actively using social media to get in touch with others. During the pandemic, the method of communication among older adults has been evolving using the latest cloud meeting platforms. However, some older adults preferred face-to-face communication (Table 50).

Table 50: Theme of methods of communication, its subthemes, and related quotes

Subtheme	Quote
Communication using the telephone, social media, or online meeting platforms	(We communicate) through phone, we also have group XXX (a cloud meeting platform), meetings and church services through online YYY (online social media and social networking service) and ZZZ (online video sharing and social media platform).
Current communication software	Yes ... XXX (a cloud meeting platform) is current. ... No (longer using) YYY (online social media and social networking service), more (on) XXX (a freeware, cross-platform, centralized instant messaging and voice-over service mobile application). We have used XXX (for) many years already.
Preferred face-to-face communication	They like their personal communication. They like to see people, they like to talk and all.

10.5.2. Theme II: Source of information

Some older adults get information updates from the conventional method, i.e., newspapers. Meanwhile, older adults seek information online nowadays via several mediums. First and foremost, an information update was deemed of utmost importance attributed to the outbreak of COVID-19. The enforcement of movement control order impulses using a particular mobile application to get information from the authority. However, some needed more detailed information they deemed lacking from a particular mobile application.

Besides, older adults get their news online via local or overseas media platforms, with some expressing that they no longer purchase newspapers. Some preferred to visit the overseas media platform for news because the information is non-biased. Some older adults obtain information from social media sent by friends or the community online. Among the older adults staying and with limited access to online information, they had their information updated by their friends, siblings and relatives. Older adults staying with family rely on their adult children, deemed technology savvy, to update them with information. The issue concerning choice of language was raised when displaying information on the sign board in the public area. The older adults suggested that the national language should be added to enable understanding of the general population instead of being limited to a particular language (Table 51).

Table 51: Theme of source of information, its subthemes, and related quotes

Subtheme	Quote
Newspaper	(Interviewer: I see... so, you mentioned about the newspaper. Are you still using the paper newspaper?) Yeah, yeah, XXX (a Malaysian English-language newspaper). (Interviewer: Oh, still buying?) Yes, yes ... I buy a yearly one, yearly subscription of 500 (Ringgit Malaysia). If I renew, then don't bother about anything like that. They just come and send me. (Interviewer: I see. Uh, do you have any problem with the font size of the newspaper?) No, no, after my cataract, I wear glasses.
Mobile application	My information (is) sometimes (obtained) through news, sometimes through MySejahtera (a Malaysian government-owned and operated mobile application), but My Sejahtera information (is) sometimes not so clear, not like you can view directly which state or I mean (for example), the Perak, which district got more of this thing (COVID-19), (but it was) not so clearly (displayed).
Mobile phone	There is always news on the mobile phone (which I can read from). I don't buy physicals anymore... no, no ... (I no longer get the information from the paper media).
Social media	Sometimes (I obtained) information through WhatsApp messages from my friends, (or) XXX (online social media and social networking service)...
Friends, siblings and relatives	Relatives, siblings, and friends are updating (me) as well.
Adult children	My son updated me on all the formal information from the Ministry (of Health). I 'm staying with one of my children at home.

Online community	We have our groups (created) in our phones, we create groups, and all of the groups we create have become (our source of) information.
-------------------------	--

10.5.3. Theme III: Positive attitudes toward the Internet

Several positive attitudes toward internet use were shared among older adults. Being proactive in learning to use the Internet was reiterated by the respondents. Having the attitude to go online by taking the initiative to ask people around them, attending virtual classes using meeting software, and being equipped with mobile devices were the responses to internet use. Digital media literacy emerged when the respondents deemed that the older populations have to be able to judge online information and understand the disadvantages of some features of social media platforms. The older adults demonstrated a positive attitude for easing their method of communication.

Most respondents perceived that the ability to go online was essential among the older generations. They understood that the importance of the Internet was not limited to the pandemic era. Some respondents expressed that they felt lost without the Internet. The older adults kept a positive attitude toward the Internet by gaining knowledge, obtaining online services, searching for information online and performing communication. The ability to use the Internet was also attributed to the work requirements before the older adult's pension (Table 52).

Table 52: Theme of positive attitudes toward Internet, its subthemes, and related quotes

Subtheme	Quote
Proactive	I like to ask. Like (when) I got the problem I like to ask ... ask anyone I like, they (are) willing to teach means I'll ask la. Let's say they will teach me, because it's my secretary (who taught me), so they are willing to teach me.
	I think they must have the attitude to go online.
	I do attend some classes. I personally attend some classes through XXX (a cloud meeting platform) because I can manage XXX, I can manage. I know how to handle it, so I attended some classes on XXX.
	If not, you'll be left behind. Yes, yes, whether you want to be technology savvy or not, you have to. You have to catch up.
	In fact, I didn't know how to use a handphone last time. I say I'm so out (compared to) all my friends are so (updated), and then I bought a handphone, got the Wi-Fi, and now at least I'm in contact with my friends.
Digital media literacy	(It's up) to you to believe you can search many things, then you see whether it's they are giving you the right info or the wrong one.
	They served the purpose (of online communication) in that sense. But, you see, for example, if you go online on XXX (online video sharing and social media platform), then you have to bear with the advertisement.
Essential	(Interviewer: But in this era, do you think that the internet is important for senior citizens?) "Yes, yes, yes, yes, yes of course yes".
	(Interviewer: But in this era, do you think that the internet is important for senior citizens?) Yes, it is important, but it is a bit difficult if (you) don't

	know (to go online). (Interviewer: But there is a need actually, it is (the internet) essential for because now...) Yes, yes, yes, you miss out so much in life, you know. No, no, no. It's not only because of the COVID (COVID-19) era that you have to learn it and all that. No way it's going right now,
Dependent	Yes, I feel lost without it (the internet).
Knowledge gaining	They can see the world very openly, and then you get knowledge, you get the knowledge (on) what (is) happening in the world. I always watch XXX (online video sharing and social media platform) videos. If I need to cook something nice, I just refer it, or my friends always put it in the apps wherever they come across something nicer. But I do bake cake.
Seeking information	What I want to touch, let's say, is not comfortable. I can check XXX (online video sharing and social media platform) and see the doctors from China saying what or any, any website info also, (there is) no need to ask doctor, I also can get something, something, some information that is very important like you see why this one pain, why that one pain, (you) can go and search what (you want to know)
Communications	(Interviewer: So, I assume you're also using this social media like WhatsApp to communicate with your family members staying elsewhere.) Yeah, yeah, everywhere, even overseas. (Commonly used) WhatsApp (a social media mobile application). Because now WhatsApp is so convenient.
Online services	Haven't been to UTC (<i>Urban Transformation Centre</i>) because I do things online.
Past experiences	Yes, yes (I used the Internet before I pension). (This is) because as teachers, we also need to use the computer to download the files and teach.

10.5.4. Theme IV: Barriers to going online

Older adults raised few barriers associated with the use of the Internet. One respondent mentioned that the skill to go online was acquired due to work requirements; however, the learning experiences were struggled. Other older adults pointed out that not everyone can sit in front of a computer to learn, and they might feel irritated, discomfort, and lack digital literacy. Some older adults felt that it was unfair to force older adults to adapt to the online system without considering the ability of the older community. The language barrier was one of the main issues associated with the ability to go online. The respondents understand that most information online was in English, which may pose difficulties to non-English users. Older adults with barely minimal expenses might face challenges paying for learning about information technology.

Fear of online scams was the concern where the older adults learned from their previous experiences and went to a reliable platform for online purchases. Some of them are aware of the risk of going online, resulting in them going online minimally or not taking the risk. Some fear Internet banking scams, personal data selling to third parties or account hacking parties. Hence, they did not do online transactions and preferred services at the counter. When dealing with Internet banking, some

respondents complained that inadequate support was received, especially among those who were digitally illiterate (Table 53).

Table 53: Theme of barriers to going online, its subthemes, and related quotes

Subtheme	Quote
Struggled learning process	I was working for the company. Imagine a computer right there. So advanced. I didn't have a choice. I have to learn the hard way, so I put my face down. I ask the younger people to teach me. I have very thick skin... They are not (willing to teach). (But) you know, everyone is busy. I really went through a learning curve like that. I bought my own computer because my job requires me to know a lot about technology. I bought books to help me learn, and by the end I was caught up.
Forced learning	...and I cannot push or push anything down the throat when they (the older adults) cannot help it (using the Internet). So, I think people like us... We felt that it was not fair. Everything and not thinking about us when they wanted to do everything.
	Don't make us do it. No, you must do it. You must do this. Don't force people into the system; you must know... You have a lot to do if you want to stay alive in this world. That doesn't seem fair to me.
Personal cognition	Some people may find it very irritating. Sitting in front of a computer is becoming painful over there.
	It (internet usage) might be important to know if there are any new information updates, but as an aunt (seniors), I'm not very good at using the internet... Personally, I don't feel at ease when I use the internet.
Language barrier	If they know English, it shouldn't be a problem if they can understand because the instructions are usually in English. I'm not sure if they have them in Chinese though.
Financial constraints	If it costs a lot, I don't think the elderly people over there can afford to learn ICT (Information and communications technology). It seems like even just getting through the day is enough. Life being really hard, you know? Then you tell them they have to go learn IT and then go to classes that don't seem to be related to the work they do for money.
Fear of online scam	Once I fell victim to an online scam, and that was enough. If you get scammed once, you get hurt, so you know you need to be careful. That's why I shop at YYY (shopping mall).
	No, no. I'm scared... XXX Bank is more reliable to me. I get along better with them... I didn't use Internet banking... I'm really afraid of those scams, and then there's the "recent event" where they sell off the data and other things like that. Because of this, I won't do any (online) transactions.
Inadequate support	... They (bankers) don't seem to understand about the old people... What will they do to help? Yeah, we're not very good with IT. When we talked about banking, people said, "Okay, you can do everything online, so you don't have to go to the bank and all that." But not everyone can do that, and they don't seem to understand about older people.
	I'm not good with computers, so my children used to teach me again and again until they got tired of it. Because my child was like this the last time I went to KL or Singapore.

10.5.5. Theme V: Digital infrastructure

Digital infrastructure, including internet connection and devices, are basic facilities required for internet use. The speed, coverage and cost of internet services were the main highlights of the older adults when they were asked about their internet services experiences. The internet speed is associated with no issue to slow, that the slower speed was related to bad weather and telco-specific. Regarding internet coverage, some respondents complained about associated coverage issues in their area of residence. Some respondents were concerned about the internet cost and suggested that either the government or the telco could subsidize the fee for the older population. Some expressed gratitude for having free internet access with a given quota during the pandemic, while some suggested free internet access to the older population during the general period. Some older adults perceived the internet pricing with good internet speed was reasonable.

Regarding devices, some respondents suggested that mobile devices should be age-friendly by giving an example that a tablet would be more feasible for older adults given its wider screen than a mobile phone. The devices were not limited to mobile devices; they included machines, such as the Automated Teller Machine (ATM) machine, that had to be aged-friendly. Some designs had a certain level of visual blockage, preventing the older adults from seeing the screen. A standardized operating digital system was deemed necessary to ease the older adults. For instance, in banking, different banks apply different operation ATMs, rendering older adults encounter difficulties when operating the machine (Table 54).

Table 54: Theme of digital infrastructure, its subthemes, and related quotes

Subtheme	Quote
Internet speed	I've used YYY (a local telco) and ZZZ (a local telco) before, but I don't think they offer good internet speeds.
	No, no (issue with internet speed). I used to have, but now I'm able to get xxx (a local telco) last November. So, (it is) okay now.
Internet coverage	There's something wrong with our (internet) coverage; it's not very good.
Subsidies for the internet	(Free) Internet (access) for the whole country, sure (everyone) can surf the web. If they can't, the government could pay 50% of the cost and residents would pay the other 50%.
	Subsidise, maybe subsidy or ask the company to reduce (the internet fee) like (for the) old age people, (the telco) company earn a lot what...
Free internet	If the government can give it to seniors for free, that's great. But not for all of them. For old people only. That's much better.
	When I didn't have Wi-Fi during COVID-19, I really liked that XXX (a local phone company) gave me 1GB. There's no doubt that it's still available, but I no longer need it.
Reasonable internet pricing	No, no (not costly) because you want the speed you have to pay.
Mobile devices	I use both my mobile phone and my desktop or laptop. A phone will be the (most) handy, though. I also have an iPad, so it's very handy, and both Wi-Fi and Unifi are now very strong (internet connections).

	...because the phone is so small, it's also difficult for them(seniors); they should have the tablet instead.
Age-friendly machine design	Some banks use of shield (around ATMs) makes life very difficult for me. I need a close look to make sure this is the correct one.
Standardized operating system	The ATM machine interface varies by bank, such as XXX (a local bank). The machines perform the same function, but they use different systems. The setup is different.

10.5.6. Theme VI: Skill training and support

Last but not least, having skills were the basic need of the older adults when they needed to go online. The older adults deemed that good supporters, either at home or outside, who were willing to guide and support them were important when dealing with Information and communications technology (ICT). This is because they are non-frequent in touch with ICT, making them unable to recall the operating method. Some older adults suggested that cost-free learning of ICT may be applicable among older adults by giving an example that other countries conducted classes as such. One of the older adults mentioned that starting early learning ICT was a key point, and it appeared challenging for the older generation to learn at their age (Table 55).

Table 55: Theme of skill training and support, its subthemes, and related quotes

Subtheme	Quote
Supporters	Yes, but the important thing is (that we) have to teach them how to use (an electronic device)...
	You need to have good supporters; if your children are willing to teach you, you will have good supporters.
	My wife will only know if you keep teaching her; she is not computer savvy. Do you realize how difficult it is? So I asked her to write it down, step by step. Then she'll figure it out.
	We've got the kids with us. We get help from the younger generation.
Cost-free learning	Maybe the government could offer free internet learning. In India, they will ask them (the seniors) to attend class and show them how to do.
Start early	They have to learn early if you don't want them to have trouble with it (ICT) later.

CHAPTER 11: DOMAIN 8 – COMMUNITY SUPPORT AND HEALTH SERVICES

11.1. Health condition of respondents

In this chapter, the importance of community support and health services of an age-friendly city in Ipoh City's perspective are reported. Out of the total 1061 respondents, a substantial proportion (95.1%) of older adults are either in good health or remain active, without restrictions associated with underlying diseases. Only a minority of individuals (4.9%) reported to be inactive or have limited mobility (Table 56).

Table 56: Health condition of respondents

Elements	n	%
Health condition		
Active but with underlying diseases	785	73.99
Healthy	224	21.11
Inactive / with restricted mobility	52	4.90

11.2. Healthcare coverage among respondents

A considerable proportion (60.9%) of geriatric population in Ipoh city lacks healthcare insurance coverage. Among the 401 respondents, corresponding to 37.8% of medically insured individuals, a majority of them (58.4%) consist of government pensioners (Table 57).

Table 57: Healthcare coverage among survey respondents in Ipoh City

Elements	n	%
Availability of healthcare coverage		
Yes	401	37.79
- Government pension	234	58.35
- Insurance	149	37.16
- Military healthcare	15	3.74
- Others*	3	0.75
No	646	60.89
Not sure	14	1.32

With respect to engagement of physical activity in a week, the data showing the most prevalent (47.3%) frequency of exercise is between 1 to 4 times, followed by 5 to 7 times a week (34.2%). It is noteworthy that 196 respondents, which correspond to 18.5% of the older adults, never perform any form of workout (Table 58).

Table 58: Physical exercise engagement of survey respondents in Ipoh City

Elements	n	%
Engagement of physical exercise in a week		
Never	196	18.47
Seldom (1-4 times)	502	47.31
Frequently (5-7 times)	363	34.21

11.3. Availability of community support and health services

Regarding the availability of selected key elements of health services in Ipoh city, significantly large proportions of elderly residents acknowledge the accessibility of respectful and helpful hospital and clinic staffs (93.30%), conveniently located health facilities (91.69%), and healthcare professionals who speak different languages (77.24%). Additionally, the majority of them recognized that nursing homes for elderly (65.91%) and a variety of healthcare professionals including specialists (67.14%) are within easy reach. To a lesser extent, this is followed by 34.84% of a total 1057 respondents taking notice of the existence of health and wellness programs and classes in areas such as nutrition, smoking cessation, and weight control. In contrast, a considerable number of senior locals are either unaware (60.15%) or uncertain (22.85%) regarding the availability of home visit services by healthcare professionals for senior patients (Table 59).

Table 59: Availability of key elements in the community support and health services of an age-friendly city in Ipoh City's perspective

Elements	Available		Not available		Unsure		Total responses
	n	%	n	%	n	%	n
Health and wellness programs and classes in areas such as nutrition, smoking cessation, and weight control	369	34.84	381	35.98	309	29.18	1059
Conveniently located health facilities	971	91.69	66	6.23	22	2.08	1059
Home visit services by healthcare professionals for senior patients	180	17.00	637	60.15	242	22.85	1059
Nursing home for older people	698	65.91	251	23.70	110	10.39	1059

A variety of health care professionals including specialists	711	67.14	170	16.05	178	16.81	1059
Health care professionals who speak different languages	818	77.24	134	12.65	107	10.10	1059
Respectful and helpful hospital and clinic staff	988	93.30	28	2.64	43	4.06	1059

11.4. Perceived importance of community support and health services

In the context of the importance of the various health service components in the development of an age-friendly city, the survey results present a unanimous perspective. The data indicate that a marked majority of senior citizens underline the importance of conveniently located health facilities (98.21%), the presence of a variety of respectful and helpful healthcare professionals (96.79% and 98.11% respectively), and the capability of them to speak different languages (95.37%). These figures are closely followed by the establishment of home visit services by healthcare professionals for senior patients (89.89%). The senior populations also believe it is essential to organize health and wellness programmes and classes in areas including nutrition, smoking cessation, and weight control (81.74%). Last but not least, nursing homes for older people is considered paramount by 81.19% of the total respondents (Table 60).

Table 60: Importance of key elements in the community support and health services domain of an age-friendly city in Ipoh City's perspective

Elements	Perceived important		Perceived not important		Unsure		Total responses
	n	%	n	%	n	%	n
Health and wellness programs and classes in areas such as nutrition, smoking cessation, and weight control	864	81.74	63	5.96	130	12.30	1057
Conveniently located health facilities	1040	98.21	4	0.38	15	1.42	1059
Home visit services by healthcare professionals for senior patients	951	89.89	27	2.55	80	7.56	1058
Nursing home for older people	859	81.19	112	10.59	87	8.22	1058
A variety of health care professionals including specialists	1026	96.79	5	0.47	29	2.74	1060
Health care professionals who speak different languages	1009	95.37	23	2.17	26	2.46	1058
Respectful and helpful hospital and clinic staff	1036	98.11	3	0.28	17	1.61	1056

11.5. Gap score analysis for community support and health services

The mean percent gap score for wellness programs, health facilities, home visit, nursing home, specialists, languages, and staff was found to be 31.3%. Based on the analysis of gap scores for all elements among the respondents, home visit for elderly patients drew attention as the element with the highest gap scores. As a result, 61.8% of respondents reported a perceived gap score of 2, followed by 17.2% revealed a perceived gap score of 1 (Table 61).

Table 61: Gap analysis of key elements in the community support and health services domain of an age-friendly city in Ipoh City's perspective

Elements	Valid responses	Gap analysis						Mean Percent (%)	
		Score 0: No perceived gap		Score 1: Perceived gap		Score 2: Perceived gap			
		n	%	n	%	n	%		
Wellness programs	927	419	45.2	166	17.9	342	36.9	54.8	31.3
Health facilities	1044	968	92.7	14	1.3	62	5.9	7.3	
Home visit	978	206	21.1	168	17.2	604	61.8	78.9	
Nursing home	971	754	77.7	53	5.5	164	16.9	22.3	
Specialists	1030	712	69.1	156	15.1	162	15.7	30.9	
Languages	1033	837	81.0	80	7.7	116	11.2	19.0	
Staff	1039	980	94.3	31	3.0	28	2.7	5.7	

11.6. Qualitative results

Holistic health services covering various aspects are vital to meet the requirements of an aged-friendly city. In general, older adults appreciate the healthcare services offered at the Ipoh city's health centers, including both primary care and hospitals. However, they express displeasure at the excessively long waiting time for clinic consultation, negative staff attitude and substandard infrastructure maintenance in the healthcare facilities. They underline the importance of establishing additional healthcare facilities that are conveniently located and allocating extra human resources to accommodate the growing number of geriatric patients in the neighbourhood. Additionally, proactive clinic and hospital administrators, skilled healthcare professionals, including multilingualism to ensure optimal service quality, affordable healthcare charges as well and the availability of public health insurance to provide coverage for those in need are proposed. They also suggested that elderly persons living alone or with a certain degree of dependency should have automatic access to home care by providing a comprehensive service that meets all, not just their medical needs, thereby favouring the possibility of continuing to live in their homes. Furthermore, they consider it necessary to offer greater visibility and accessibility to individualized, holistic and multidisciplinary patient care, for instance, the availability of

nutritional advice or exercise programs for the overweight and obese group, mental health support, and palliative care (Table 62-65).

11.6.1. Theme I: Waiting time

Table 62: Theme of waiting time, its subthemes, and related quotes

Subtheme	Quote
Long waiting time	I have to wait for a very long time. I wonder why, in the beginning, at 8 am, their number system started, but all of a sudden, after one hour, the number stopped and not running.
Waiting time for a shuttle	No, no, actually it is not very long, the waiting was sometimes one minute. Sometimes, when you arrive, that van has just gone off. So you will need to wait a while.

11.6.2. Theme II: Healthcare personnel

Table 63: Theme of healthcare personnel, its subthemes, and related quotes

Subtheme	Quote
Negative staff attitude	That is what I don't like about it. So finally, I was reluctant to go because the doctor there was also not friendly. When I walked into the room, the way the doctor spoke to me, it seemed that I was the one on the wrong side, and the way they talked to me was as if they were scolding me.
	When we have queries, for example, regarding nutritional information for my mother, who is ill, they will always give advice. Actually, the doctors are very good. Ipoh's specialists are very good. They are very helpful.
Language barrier	They should place more Chinese doctors in the clinic or hospital for patients who have language barriers in expressing their sickness complaints more easily. This can prevent doctors from getting impatient with the patients, too, due to the language barrier.
Staff skills	Some of the nurses, who I presumed maybe they are not be well-trained, causing pain, swelling and bruising for patients after blood taking procedure.

11.6.3. Theme III: Healthcare infrastructure

Table 64: Theme of healthcare infrastructure, its subthemes, and related quotes

Subtheme	Quote
Inadequate parking spaces	The parking is also very bad. No parking at all.
Accessible health	I don't know how the government wants to do it. I think one way is to

facilities	relocate the 1 Malaysia clinic to a few selected areas to cater to neighbouring residents to avoid overcrowding in one particular clinic.
	They provide us with a wheelchair, and we can use it to wheel her into the room.
Additional healthcare facilities to support more patients	If the clinic is not big enough, they can build another clinic so that people do not need to overcrowd the Gunung Rapat clinic. This way can distribute the patients, making it easily accessible for everyone.

11.6.4. Theme IV: Healthcare services

Table 65: Theme of healthcare services, its subthemes, and related quotes

Subtheme	Quote
Inefficient appointment system	Most elderly like me, I'm approaching 73 years old, so it is inconvenient for me if they're not able to reschedule the time of appointment.
	My wife had to travel to Kuala Lumpur to take care of my granddaughter. So, she asked for an earlier appointment for a blood test. Unfortunately, they mentioned that rescheduling is impossible. The reason given was that there was a long queue in the clinic.
	My wife needs to attend a few different departments' clinic appointments; problems like this just give us real torture.
Privilege for elderly	If you are only in a wheelchair or with a walking stick, you will be attended earlier. If not, you will have to wait in line with everyone else.
Unavailability of individualized, holistic and multidisciplinary patient care	Within the hospital setting, the multidisciplinary patient care is easily accessible. They know who to look for. For example, geriatricians and physiotherapists for bedridden patients. As a way to care for older adults, at least we need to target a team and reorganize this structure, and then maybe we can move further from there.
Home visit	Yes. I know it through a friend. My friend's sister is a schizophrenic patient. I've been hearing very good reports from my friend regarding her sister and her own experiences. The homecare service I heard from my friend comes to their house on an appointment basis.
	Yes, a home visit is good for her because she did not go out.
	Once a month, if the doctors could come and check for minor illnesses, I'm not talking about major illnesses. Some of them might have vitamin deficiencies. So they can get diagnosed and prescribed appropriately.

References

1. Perak. In: Wikipedia [Internet]. 2023 [cited 2023 Oct 16]. Available from: <https://en.wikipedia.org/w/index.php?title=Perak&oldid=1179325507>
2. James W. W. Birch. In: Wikipedia [Internet]. 2023 [cited 2023 Oct 16]. Available from: https://en.wikipedia.org/w/index.php?title=James_W._W._Birch&oldid=1167547143
3. Great Malaysian Railway Journeys [Internet]. [cited 2023 Oct 16]. Ipoh Then & Now. Available from: <https://great-railway-journeys-malaysia.weebly.com/ipoh-then--now.html>
4. Bachok^a S, Osman^a M, Ibrahim M, Ponrahono Z. Regenerating Ipoh City Mobility through High Level of Service (LOS) of Public Bus Service. *Procedia - Social and Behavioral Sciences*. 2015 Jan 27;170:680–9.
5. HIDS - Hari Ini Dalam Sejarah [Internet]. [cited 2023 Oct 16]. Available from: <https://hids.arkib.gov.my/#/>
6. Ipoh History Facts and Timeline: Ipoh, Perak, Malaysia [Internet]. [cited 2023 Oct 16]. Available from: http://www.world-guides.com/asia/malaysia/perak/ipoh/ipoh_history.html
7. Limited PC. Ipoh; The Town that Tin Built: A Review of the History, Progress and Development of Perak's Capitol. Phoenix Communications Limited; 1962. 72 p.
8. Ipoh Mayor's Portal [Internet]. [cited 2023 Oct 16]. Available from: <http://ipohmayorportal.blogspot.com/2011/09/>
9. Ipoh Population 2023 [Internet]. [cited 2023 Oct 16]. Available from: <https://worldpopulationreview.com/world-cities/ipoh-population>
10. Department of Statistics Malaysia. Population distribution and basic demographic characteristics 2010. Malaysia: Department of Statistics; 2011. 134 p.
11. Household Income, Poverty and Household Expenditure | Official Portal of Ministry of Economy [Internet]. [cited 2023 Oct 16]. Available from: <https://www.ekonomi.gov.my/en/socio-economic-statistics/household-income-poverty-and-household-expenditure>
12. Mafauzy M. The Problems and Challenges of the Aging Population of Malaysia. *Malays J Med Sci*. 2000 Jan;7(1):1–3.
13. Global age-friendly cities: a guide [Internet]. [cited 2023 Oct 16]. Available from: <https://www.who.int/publications-detail-redirect/9789241547307>
14. Ageing and health [Internet]. [cited 2023 Oct 16]. Available from: <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>
15. Ipoh ranked among world's best places to retire [Internet]. [cited 2023 Oct 16]. Available from: <https://www.thesundaily.my/archive/1027992-JRarch249754>
16. Sararaks S, Fun WH, Tan E, Chong D, Mahmud S, Editors. Advancing Universal Access & Quality Healthcare as a Health Research Priority under the 11th Malaysia Plan. 2019.

17. AARP Livable Communities - Information and Inspiration for Local Leaders - AARP.org/Livable [Internet]. [cited 2023 Oct 16]. Available from: <https://www.aarp.org/livable-communities/>
18. Scholtes VA, Terwee CB, Poolman RW. What makes a measurement instrument valid and reliable? *Injury*. 2011 Mar 1;42(3):236–40.
19. Tsang S, Royse C, Terkawi A. Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi J Anaesth*. 2017;11(5):80.
20. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures: *Spine*. 2000 Dec;25(24):3186–91.
21. Younan L, Clinton M, Fares S, Samaha H. The translation and cultural adaptation validity of the Actual Scope of Practice Questionnaire. *East Mediterr Health J*. 2019 Mar 1;25(3):181–8.
22. Nunnally JC. An Overview of Psychological Measurement. In: Wolman BB, editor. *Clinical Diagnosis of Mental Disorders* [Internet]. Boston, MA: Springer US; 1978 [cited 2023 Oct 16]. p. 97–146. Available from: http://link.springer.com/10.1007/978-1-4684-2490-4_4
23. Altman DG. *Practical Statistics for Medical Research* [Internet]. 0 ed. Chapman and Hall/CRC; 1990 [cited 2023 Oct 16]. Available from: <https://www.taylorfrancis.com/books/9781000228816>
24. Young MA, Dhakal U, Kessler V, Kunkel SR. Report to the Age-Friendly Oxford Leadership Advisory Group.
25. Buckner S, Pope D, Mattocks C, Lafortune L, Dherani M, Bruce N. Developing Age-Friendly Cities: an Evidence-Based Evaluation Tool. *Journal of Population Ageing*. 2019 Jun 1;12:1–21.
26. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006 Jan 1;3(2):77–101.

Unmet needs in older adults



(n=1,061 respondents aged 60 years & older)

50.7% experience transportation barriers.



83.8% would like to have priority **PARKING** for senior citizens.



48.7%



lack of accessible & convenient public transportation to key destinations.

Chang CT et al. Perceived Gap of Age-Friendliness among Community-Dwelling Older Adults: Findings from Malaysia, a Middle-Income Country. *Int J Environ Res Public Health*. 2022 Jun 11;19(12):7171. doi: 10.3390/ijerph19127171. Infographic by Medical & Scientific Affairs, Institute for Clinical Research, NIH. (1 August 2022)



Unmet needs in older adults

(n=1,061 respondents aged 60 years & older)



1 in 2 senior citizen has unmet housing needs.



2 in 5 older adults are looking for job opportunities.



Chang CT et al. Perceived Gap of Age-Friendliness among Community-Dwelling Older Adults: Findings from Malaysia, a Middle-Income Country. *Int J Environ Res Public Health*. 2022 Jun 11;19(12):7171. doi: 10.3390/ijerph19127171. Infographic by Medical & Scientific Affairs, Institute for Clinical Research, NIH. (1 August 2022)

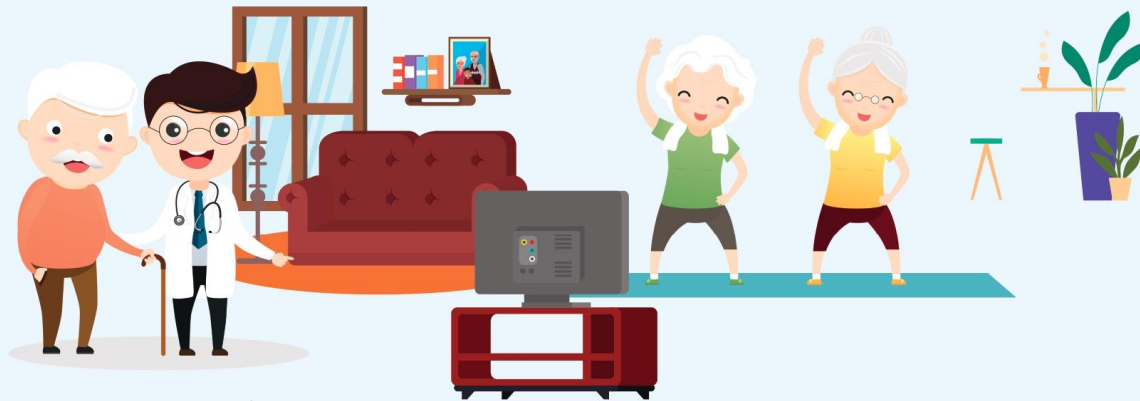


Unmet health & wellness needs

(n=1,061 respondents aged 60 years & older)



79% desired in-home care from healthcare professionals



55% interested in health and wellness activities

E.g. nutrition, smoking cessation, and weight management programmes.



Chang CT et al. Perceived Gap of Age-Friendliness among Community-Dwelling Older Adults: Findings from Malaysia, a Middle-Income Country. *Int J Environ Res Public Health*. 2022 Jun 11;19(12):7171. doi: 10.3390/ijerph19127171. Infographic by Medical & Scientific Affairs, Institute for Clinical Research, NIH. (3 August 2022)

ICR NIH
INSTITUTE FOR CLINICAL RESEARCH
NATIONAL INSTITUTES OF HEALTH



Institute for Clinical Research, National Institutes of Health
1, Jalan Setia Murni U13/52, Section U13, Setia Alam,
40170 Shah Alam, Selangor, MALAYSIA.
Tel : +603-3362 8403/ 8316
Fax : +603-3362 8001
Website : www.nih.gov.my

e ISBN 978-629-98904-0-9



Age –Friendly City Ipoh:
Baseline Assessment Report