APPENDIX A

Invited Guests, Speakers, and Mentors

A total of 31 experts and thought leaders kindly accept the invitation to contribute to this Talent Incubator as listed below.

1. **Prof Guenter Lepperdinger**, Professor of Cell Biology and Genetics, University Salzburg (Full-time senior mentor)
2. **Prof Suresh Rattan**, Head of the Laboratory of Cellular Ageing, Aarhus University (Full-time senior mentor)
3. **Dr Anne Tine Hjorth**, Senior Clinical Instructor in Dentistry, Aarhus University (Full-time senior mentor)
4. **Prof Yap-Seng Chong**, Dean of Yong Loo Lin School of Medicine, National University of Singapore (NUS) (Opening Speech, Career mentor)
5. **Prof Johan G Eriksson**, Director of Human Potential Translational Research Programme, NUS Yong Loo Lin School of Medicine (Keynote speaker, panellist, judge)
6. **A/Prof Heng Chew Kiat**, Assistant Dean (Graduate Studies) at NUS Yong Loo Lin School of Medicine (panellist, judge)
7. **Prof Andrew J Scott**, Professor of Economics, London Business School (Online speaker)
8. **Prof Brian Kennedy**, Distinguished Professor of Biochemistry & Physiology, NUS Yong Loo Lin School of Medicine (Speaker, Career mentor)
9. **Prof Woon-Puay Koh**, Assistant Dean and Director for the NUSMed Clinician-Scientist Development Unit, NUS Yong Loo Lin School of Medicine (Speaker)
10. **Prof Dean Ho**, Provost's Chair Professor, Director of The Institute for Digital Medicine (WisDM), NUS Yong Loo Lin School of Medicine (Speaker)
11. **A/Prof Jason Phua**, CEO of Alexandra Hospital (Speaker)
12. **A/Prof Jeremy Lim**, CEO of AMiLi (Speaker)
13. **A/Prof Christopher Chen**, Director of the Memory Aging and Cognition Centre, National University Health System (NUHS) (Speaker)
14. **A/Prof Michael Dunn**, Co-Director of education, the Centre for Biomedical Ethics, NUS Yong Loo Lin School of Medicine (Speaker)
15. **A/Prof Jan Gruber**, NUS Yong Loo Lin School of Medicine (Speaker)
16. **Adj Asst Prof Zhongwei Huang**, Deputy Director of Asia Centre for Reproductive Longevity & Equality (ACRLE), NUS Yong Loo Lin School of Medicine, (Speaker, Career mentor)
17. **Adj A/Prof Rufaihah Binte Abdul Jalil**, NUS Yong Loo Lin School of Medicine (Speaker)
18. **Dr Alex Zhavoronkov**, Founder and CEO, Insilico Medicine, (Online speaker)
19. **Dr Naras Lapsys**, Nutrition & anti-aging consultant (Speaker)
20. **Dr Elena Sandalova**, Head of Clinical Trials, NUHS Centre for Healthy Longevity (Speaker)
21. **Dr Jorming Goh**, Research Assistant Professor, NUS Yong Loo Lin School of Medicine (Speaker)
22. **Mr Craig McGee**, Co-Founder, Chi Tree Health & Chi Longevity (Speaker)
23. **Ms Susan Tan**, Founder, ECI (Speaker)
24. **Ms Anna Milani**, Founder, SPARKD (Speaker)
25. **Asst Prof Vincenzo Sorrentino**, NUS Yong Loo Lin School of Medicine (Career mentor)
26. **Dr Karen Crasta**, Research Assistant Professor, NUS Yong Loo Lin School of Medicine (Career mentor)

27. **Dr Lois Anne Zitzow**, Director of Comparative Medicine and Attending Veterinarian, NUS (Career mentor)
28. **Dr Sheryl Tan**, Senior Director, Head of Medical – Wider Asia, Haleon (Career mentor)
29. **Mr Jeff Duyvesteijn**, Founder & CEO, For Youth (Career mentor)
30. **Mr Nishanth Sudharsanam**, Founder, Jezer0x.com (Career mentor)
31. **Ms Shruti Bose**, Regional Communications and Public Affairs Director, Roche Diagnostics (Career mentor)

APPENDIX B

Programme Timetable

Time	Activity	Facilitator/Speaker
Monday 3 July 2023 (Day 0)		
	ARRIVAL	Staff
19:00	WELCOME DINNER	-
20:00-21:00	Ice breaker	Prof Hans Meij / Prof Guenter Lepperdinger
Tuesday 4 July 2023 (Day 1)		
7:00	*Daily exercise: Yoga*	Dr Ajla Hodzic Kuerec
7:30	BREAKFAST	-
8:30	Opening speech	Prof Yap-Seng Chong (Dean, NUS Yong Loo Lin School of Medicine)
8:45	Programme introduction	Prof Hans Meij
9:30	Conversations on Age and Ageing #1/5	Prof Suresh Rattan
10:45	*Morning break*	-
11:00	Conversations on Age and Ageing #2/5	Prof Guenter Lepperdinger
12:15	LUNCH	-
13:15	[Lecture] Longevity Medicine: Reality or Hype	Prof Andrea Maier
14:30	SG City Mission #1: Introduction to topics and mentors	Prof Hans Meij / Dr Hataitip Tasena
15:30	*Afternoon break*	-
15:45	Leadership Workshop Series #1/3	Prof Hans Meij
17:00	*Change break*	-
17:15	*Daily exercise: HIIT*	SPARKD
18:30	INTERNATIONAL MUSIC NIGHT DINNER	Dr Lihuan Guan / Belinda Wang
Wednesday 5 July 2023 (Day 2)		
8:00	BREAKFAST	-
8:30	[Lecture] Inflammation and immune system	Dr Elena Sandalova
10:00	[Lecture] Muscle ageing	Research Asst Prof Jorming Goh
11:00	*Morning break*	-
11:15	[Lecture] Animal models for ageing research	A/Prof Jan Gruber
12:15	LUNCH	-
13:00	Business leader series: Entrepreneurship in Preventative Health	Mr Craig Mcgee
14:15	*Afternoon break, change, travel*	-
15:00	Brain & Body Games (SPARKD)	Ms Anna Milani
17:00	*Travel*	-
17:30	SG City Mission #2: Literature search	Mentors
19:00	DINNER	-

20:00-21:00	Participant presentations (optional)	TBC
21:00-22:00	Conversations on Age and Ageing #3/5	Prof Suresh Rattan
Thursday 6 July 2023 (Day 3)		
7:15	*Daily exercise: Yoga*	Dr Ajla Hodzic Kuerec
8:00	BREAKFAST	-
9:00	[Lecture] Hallmarks of ageing	Prof Brian Kennedy
10:00	[Lecture] Stem cells in repair and rejuvenation	Adj A/Prof Rufaihah Binte Abdul Jalil
11:00	*Morning break*	-
11:15	[Lecture] Multi-dimensional research in ageing (Singapore Chinese Health Study)	Prof Woon-Puay Koh
12:15	LUNCH	-
13:15	[Lecture] Diagnostics for biological ageing	Prof Andrea Maier
14:45	*Afternoon break*	-
15:00	[Lecture] Brain ageing	A/Prof Christopher Chen
16:00	[Lecture] Microbiome	A/Prof Jeremy Lim
17:15	*Change break*	-
17:30	*Daily exercise: HIIT*	SPARKD
19:00	DINNER	-
20:00-21:00	Leadership Workshop Series #2/3	Prof Hans Meij
Friday 7 July 2023 (Day 4)		
8:00	BREAKFAST	-
9:00	Thought leader's talk #2: Hospital care	A/Prof Jason Phua (Interviewed by Prof Hans Meij)
10:15	*Morning break*	-
10:30	Business leader series: Lifestyle coaching for longevity	Ms Susan Tan
11:30	Business leader series: Diet & Nutrition	Dr Naras Lapsys
12:30	LUNCH	-
13:30	[Lecture] Drugs & Supplements	Prof Andrea Maier & Dr Ajla Hodzic Kuerec
15:00	[Online Lecture] Health economics	Prof Andrew J Scott
16:00	*Afternoon break*	-
16:15	Conversations on Age and Ageing #4/5	Prof Suresh Rattan / Prof Guenter Lepperdinger
17:15	*Change break*	-
17:30	*Daily exercise (Zumba)*	Dr Lois Anne Zitzow
19:00	DINNER	-
20:00-22:00	SG City Mission #3: Survey design & Field trip planning	-
Saturday 8 July 2023 (Day 5)		
7:15	*Daily exercise: Yoga / Free Jogging*	Dr Ajla Hodzic Kuerec / Self
8:00	BREAKFAST	-
9:00	SG City Mission #4	-

	Group 1: Transportation and Workout (SG expats)	Dr Ajla Hodzic Kuerec
	Group 2: Healthier SG awareness	Dr Anna Szuecs
	Group 3: Impact of 'Healthier Choice Symbol' on consumers	Shivaanishaa Raventhiran
	Group 4: Active People, Healthy Nation (Walk & Jog buddy system)	Stephen Raj
	Group 5: Public opinions on increased retirement age	Dr Lihuan Guan, Jessica Lu
19:00	NETWORKING DINNER	-
Sunday 9 July 2023 (Day 6)		
9:00	BREAKFAST	-
	Free day / Self-study	
Monday 10 July 2023 (Day 7)		
7:15	*Daily exercise: Yoga*	Dr Ajla Hodzic Kuerec
8:00	BREAKFAST	-
9:00	SG City Mission #5: Follow-up	Mentor
10:45	*Morning break*	-
11:00	SG City Mission #5: Follow-up	
12:00	LUNCH	-
13:00	Conversations on Age and Ageing #5/5	Prof Suresh Rattan
14:30	[Lecture] Research ethics	A/Prof Michael Dunn
15:30	*Afternoon break*	-
15:45	Scientific communication tips / How to give a bad lecture	Prof Suresh Rattan / Mentors
16:30	How to prepare yourself for future career (professional/personal branding)	Prof Hans Meij + Prof Suresh Rattan ; Prof Andrea Maier + Prof Guenter Lepperdinger
17:15	*Change break*	-
17:30	*Daily exercise: HIIT*	SPARKD
19:00	DINNER	-
20:00-22:00	Leadership Workshop Series #3/3	Prof Hans Meij
Tuesday 11 July 2023 (Day 8)		
8:00	BREAKFAST	-
9:00	Scientific Writing: Reviewer's and Editor's perspectives	Prof Guenter Lepperdinger ; Prof Suresh Rattan
10:30	*Morning break*	-
10:45	SG City Mission #6: Follow-up	Mentors
12:30	LUNCH	-
13:30	[Lecture] Healthy Longevity Medicine -> bring it to practise	Prof Andrea Maier
15:00	*Afternoon break*	-
15:15	[Career sessions] Meet the professionals / Speed dating	Career mentors
17:15	*Change break*	-
17:30	*Daily exercise (Zumba)*	Dr Lois Anne Zitzow

19:00	DINNER	-
20:00-22:00	SG City Mission #7: Self-study	Mentor
Wednesday 12 July 2023 (Day 9)		
7:15	*Daily exercise: Yoga*	Dr Ajla Hodzic Kuerec
8:00	BREAKFAST	-
9:00	[Lecture] Digital Phenotyping	Prof Dean Ho
10:15	*Morning break*	-
10:45	[Online Lecture] Machine Learning and Artificial intelligence	Dr Alex Zhavoronkov
12:00	LUNCH	-
13:00	[Lecture] Women's Health and Longevity	Adj Asst Prof Zhongwei Huang
14:00	*Afternoon break*	-
14:15	SG City Mission #8: Preparing for presentation	Mentors
16:15	Reflection sessions	Mentors
17:15	*Change break*	-
17:30	*Daily exercise: HIIT*	SPARKD
19:00	ROOFTOP DINNER	-
Thursday 13 July 2023 (Day 10) - **Public Event**		
8:00	BREAKFAST	-
	Public Event	
9:00	Opening Remarks	Prof Andrea Maier
9:10	[Keynote] The Human Potential	Prof Johan G Eriksson
10:00	[Interview] Public health & Government Perspectives	Mr Henry Kwek (MP) & Prof Johan G Eriksson
10:30	SG City Mission Presentations	Judges: Mr Henry Kwek (MP) Prof Johan G Eriksson A/Prof Heng Chew Kiat
11:40	*Morning break*	General public
	End of Public Event	
12:00	Graduation ceremony	Participants & Staff
13:00	LUNCH	Participants & Staff
	End of the Programme	

APPENDIX C

Findings from Singapore (SG) City Missions

MISSION 1: "Buddy-Up" to encourage physical activity in Singapore

Group members: Aikedan Ainiwaer, Melanie Grace Yap Cruz, Roi Amster, Samuel Yu, Shazna Ahamed, Susan Oudbier, Zhang Yichi

Mentors: Stephen Raj, Dr Hataitip Tasena

WINNER of the Best SG City Mission Award

Background

Only 33% of Singaporeans exercise regularly and exercising together has been shown to increase motivation for physical activity (Rackow et al., 2015, Samendinger et al., 2018). The "Buddy-Up" program aims to encourage people to walk or jog together, which is a novel approach to increase physical activity. As an active lifestyle is key to healthy ageing (Moreno-Agostino,2020), the Singaporean government has been seeking to promote an active lifestyle in the population (Action-plan, 2023; Healthhub, 2023). Different forms of Exercise-Buddy programs have been used in different settings around the world. Fundamentally, this would entail more physically active individuals to "Buddy-Up" with someone less physically active, and for both of them to engage in shared physical activity sessions together. However, these initiatives have often not been successfully scaled up or used at a national level (Reis, 2016).

Objectives and key questions

This project aims to evaluate the acceptability of a "Buddy-Up" program in the Singaporean population. For our city mission, we restricted the scope of the Buddy Program to walking or jogging,

because across all age groups, these were the two most commonly employed physical activities (Ganesan, 2023). The key questions in this City Mission were:

1) Would Singaporean residents be open to participate in a walk-jog "Buddy-Up" program?
2) What are the motivators and challenges for participation in an exercise Buddy program in Singapore?
3) Would we recommend the Singapore government to implement the walk-jog buddy system locally?

Key findings

According to our survey among 317 Singaporeans, 75% would participate in "Buddy-Up" for walking or jogging together. 43% of the respondents who do not exercise regularly reported that "Buddy-Up" would increase their exercise frequency to at least once a week. Thus, "Buddy-Up" can make Singaporeans more physically active.

72% of the regular and 62% of the non-regular exercisers, found social interaction to be a highly encouraging factor to engage in the buddy-up programme. 68% and 63% of the regular and non-regular exercisers found that they will be more committed to their fitness goal if they were in the buddy-up programme. 71% of the regular and 65% of the non-regular exercisers were more motivated to exercise if they exercise with a buddy. Interestingly, 60% of the regular exercisers did not require rewards. However, among the non-regular exercisers, only 40% did not require rewards.

Challenges:

In terms of the barriers to the buddy-up programme, both regular and non-regular exercises preferred walking or jogging alone (33% of regular exercisers, and 20% of non-regular exercisers), they experienced conflicts in their schedule (66% of regular exercisers and 68% of non-regular exercisers), and they did not want to buddy-up with a stranger (43% of regular exercisers and 46% of non-regular exercisers).

Recommendation for practice

We propose a "Buddy-Up" module that allows participants to choose the location and date to walk or jog with a buddy. The "Buddy-up" module could be included as part of a regular update to the Healthy 365 App. Existing health promotion board #Moveit programs could serve as community touchpoints to disseminate information about the program and provide minor technical assistance as required. The existing pool of #Moveit participants can also prime "Buddy-Up" with geographically diverse pools of potential participants active in physical activity programmes in different settings across the island. Existing national steps challenge incentives frameworks could be leveraged to provide incentives for "Buddy-Up", though our data suggest that these might not be necessary.

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MISSION 2: Opinions on Increasing the Retirement Age in Singapore

Group members: Advitiya Khandelwal, Al Hussein Elwan, Jonas John, Li Huiqi, Kua Zhong Jie Zaylea, Marlene Musial, Wabwire Lodrick Odo

Mentors: Jessica Lu, Dr Lihuan Guan, Prof Hans Meij

WINNER of the Best Presentation Award

Background

Singapore's population faces a declining total fertility rate and longer life expectancies, and one in four citizens will be aged 65 years and older by 2030 (Singapore Department of Statistics, 2023) (Ministry of Health, 2022). This poses significant challenges to Singapore's old-age support ratio, which is the number of individuals who can provide economic support to the number of dependent older individuals. Over the past decades, this ratio has declined steadily. By 2030, there are less than three adults to support one dependent adult (Singapore Department of Statistics, 2021). To combat the shrinking working-age population and to enable older Singaporeans who are capable and wish to continue working, the Retirement Act was amended to raise the maximum possible statutory retirement age to 63 in 2022, which will be increased gradually to 65 by 2030 (Ministry of Manpower, 2019). Despite the government's plans to extend productive longevity, it remains unknown whether Singaporeans agree or disagree with the increasing retirement age. This cross-sectional study aims to survey public opinions on increasing retirement age.

Objectives

1. Examine public opinions on the benefits and challenges of increasing retirement age.
2. Determine factors that drive Singaporeans to continue working.
3. Identify public preferences for retirement age.

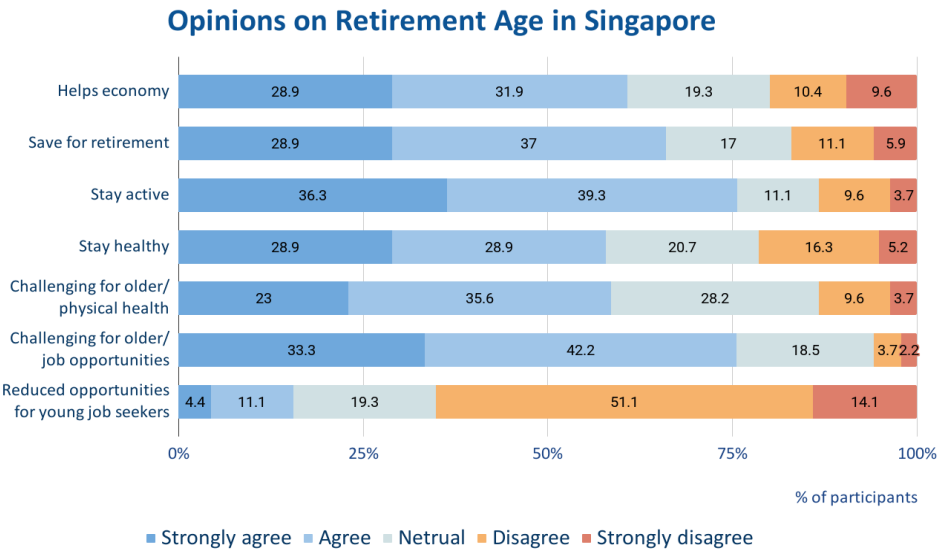
Methodology

A cross-sectional study was conducted in shopping malls and food hawkers using convenience sampling methods. Eligible participants were Singapore citizens or permanent residents between 40-65 years and hold a permanent role/job. Face-to-face interviews and online surveys were conducted

to collect information on demographics and opinions on increasing the retirement age. A total of nine close-ended questions with a 5-point Likert scale were used to assess the benefits of this policy on the economy and individual's health, and challenges faced by individuals. Additionally, two open-ended questions were asked to assess the most important factor that motivates residents to work and their preferred retirement age.

Results

A total of 134 respondents (78.0% male, 68.1% Chinese) with a median age of 52 (interquartile range, IQR: 45–58) completed the survey. Over half of the respondents (63.7%) are in the SGD 3000-8000 income bracket and 86.6% are above pre-university level of education. The majority are aware of the current retirement age in Singapore (65.2%). This sample cited the ideal retirement age is 65 years old (IQR: 60–70), in line with the government initiative, with more than half (58.5%) wanting to retire at 65 years or older. Primary factors to continue working include, financial stability (37%), continuing good health (31%), personal fulfillment (17%), being included in society (8%), and good working culture (7%).

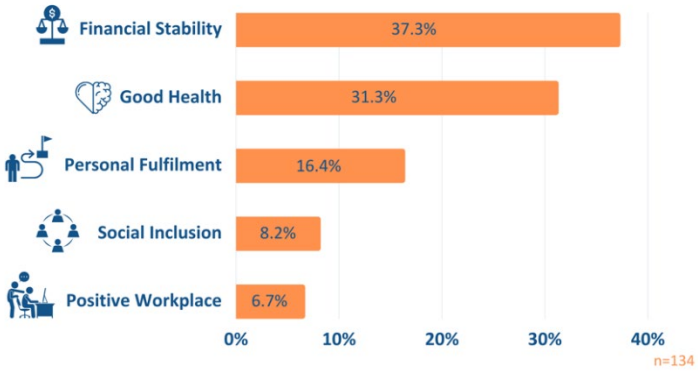


Opinions on benefits and challenges of increasing retirement age

From the perspective of the economy, 60.8% and 65.9% respondents agreed that raising the retirement age would help Singapore's economy and encourage more people to work, and would allow them to save more for their retirement, respectively. From the perspective of health, 75.6% and 57.8% respondents, respectively, agreed that raising the retirement age would encourage older adults to continue staying active in society and increase the number of healthy years for individuals while 21.5% respondents disagreed and 20.7% remained neutral on this matter. 58.6% and 76.5% respondents agreed that this policy would pose challenges for older Singaporeans due to their physical health and that such challenges come from the availability of job opportunities, respectively. However, 65.2% respondent disagreed that raising the retirement age would not result in reduced job opportunities for younger job seekers.

The open-ended questions helped to identify five major motivators for Singaporeans to continue working and comply with the Retirement Act. The most popular motivator, expressed by 37.3% of respondents, was Financial Stability: "The state of having a secure and reliable financial situation that provides individuals with confidence and peace of mind for their future." The second most popular motivator (31.3%) was Good Health: "The well-being of individuals, encompassing physical and mental aspects, and their ability to maintain an active and balanced lifestyle." The third motivator (16.4%) was Personal Fulfillment: "The pursuit of individual passions, interests, and personal growth, finding satisfaction and purpose in one's work and life."

The fourth most popular motivator (8.2%) was Social Inclusion: “The sense of belonging and active participation in social networks, communities, and meaningful relationships.” Finally, Positive Workplace was the fifth motivator (6.7%): "The environment and values within an organization that shape an inspiring work experience".



Recommendations

The following recommendations are suggested to address the challenges of physical health problems among older workers, reduced job opportunities for the older population, as well as financial concerns towards retirement.

- Support employers to redesign and innovate on workplace practices, processes, and job scopes for older workers (e.g., making Work from Home more accessible)
- Improve awareness on programs that provide upskilling and training support for older adults (e.g., SkillsFuture Credit Top-Up and Adapt-and-Grow Programmes to adapt to changing job demands and reskill for new opportunities)
- To pioneer the use of biological age as a measure for retirement: Given considerable diversity in how people age, the use of chronological age may be a weak predictor of people’s needs and abilities.
    - Policies couched purely in terms of chronological age, such as the retirement act, may be problematic as those who are unable to continue to work would require more support while those who can work should be provided with more incentives. Thus, the use of biological age as a measure of retirement age may be more representative of one’s physical health.

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MISSION 3: How does the 'Healthier Choice' Symbol influence dietary choices in Singapore

Group members: Emmanuel Burot, Jiatong Shan, Laure Verstraeten, Siti Masfiah, Rebecca Kerstens, Wong Sai Ho, Zahra Fanaei-kahrani

Mentors: Shivaanishaa Raventhiran, Prof Suresh Rattan

Background

Singapore (SG) has one of the highest percentages of diabetes among developed countries (1). Additionally, the rate of obesity is increasing in this country (1). Therefore, implementing effective government actions to create a better system for healthier diet is very important. Healthier Choice Symbol (HCS) is one of the government's approaches to improve the diet. HCS serves as an icon to consumers, indicating which products are healthier options within a specific category. However, this symbol does not consider if the food is nutritious overall, only comparing products within the same category. This logo has been applied on food packages since 1998 and in Hawker/Food Centres (HFC) since 2003. A study in 2020 by Dr. Eric Finkelstein from Duke NUS showed that the HCS logo on food packages leads to an increase in the purchase of HCS products by 5% (1). But since more than 80% of Singaporeans eat in HFCs at least once a week, it is important to know whether implementation of this logo influences people's choice or not (2).

Objectives & key questions

Our objective was to speak with people who have resided in SG for at least one year, and determine answers to the following:

1. Do SG residents recognize the "healthier choice" and "nutri-grade" symbols?
2. Do SG residents use these symbols when they choose food and drinks?
3. If SG residents recognise the HCS, how many of them have made some suggestions, and

what do they propose?

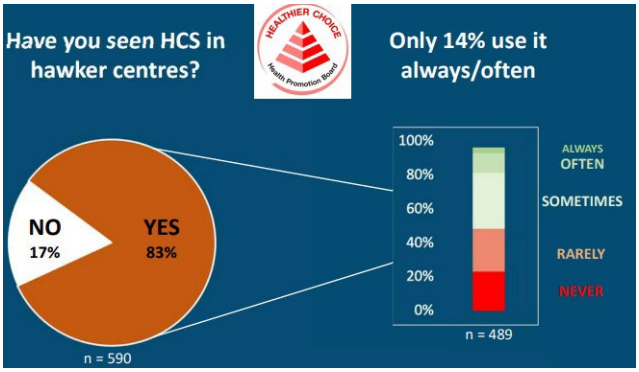
Additionally, we wanted to ascertain whether stall holders are using the HCS, how easy or difficult they found the implementation process, and whether they think it impacts customer choices.

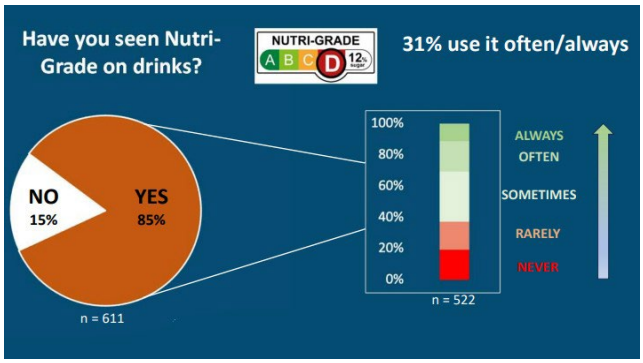
Based on our findings we aimed to propose ways to improve the current symbol or propose some potential new initiatives for the policy makers that may encourage healthier eating habits.

Key findings

Among 611 SG respondents involved in this survey (online and offline), 71% of them are female, and 63% are between 20 and 45 years old. Most of them eat 1 to 3 times per week out in a HFC.

Overall, 83% of respondents have seen the HCS in HFCs , but half of them never or rarely use it. One third of respondents have suggestions for improvement, including making it bigger (35%) and using other symbols (17%). Other suggestions included using different colours, displaying more information, and using different languages. We also explored the implementation of that symbol from the stall owners' perspective. Out of 65 stalls that were open, only 16 of them displayed the HCS. Among the 5 who implemented the HCS, 4 of the stalls said that it is because of the help of external people who visually assessed the food and granted them the symbol.





Respondents recognise Nutri-Grade better; about 85% of them have seen it and 31% often use it for choosing their drinks. About 17.2 % of them suggest improvements for Nutri-Grade such as providing more education about it (38%) and making it bigger (18%) among other suggestions.

Recommendations to the policymakers/public/stakeholders

1. Bigger & Clearer Symbol: Respondents prefer the symbols to be bigger and clearer because currently they do not find it easy to take notice of the symbols.
2. Better Information: Some of the respondents are not familiar with the information behind the letters and require more information about this symbol. They need more publicity and education about the system of the healthy choice symbol as well as the nutri-grade symbol.
3. Compulsory: The third suggestion from the respondents is to make the symbol compulsory. In other words, more foods and drinks should apply the relevant symbols.

These recommendations are in line with effective symbols which are used in other countries, as shown in the picture below.

References

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MISSION 4: Transportation and Workout: a 2-in-1 Approach

Group members: David Major, Jan Duin, Jessalyn Low, Joyce Rodvie Sagun, Liu Cong, Tom Francis, Wasu Mekniran

Mentors: Dr Ajla Hodzic Kuerec, Prof Günter Lepperdinger

Background

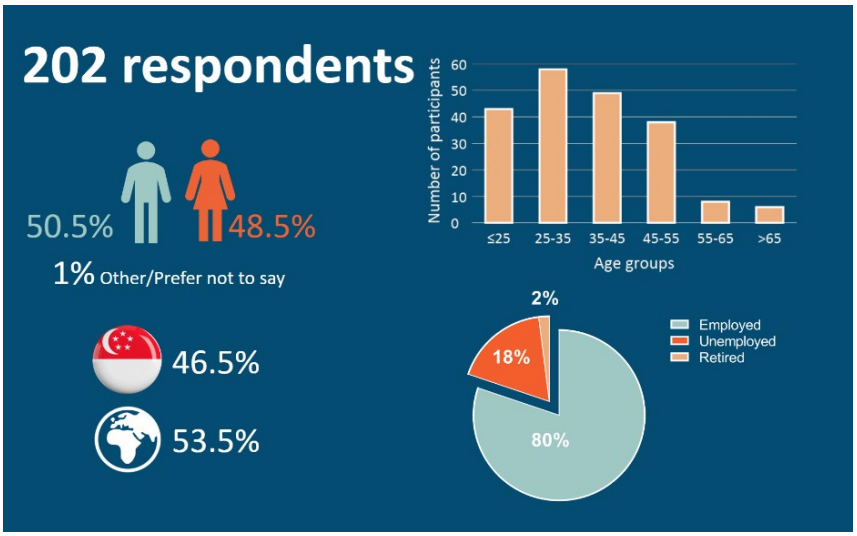
Regular physical activity plays a crucial role in promoting healthy ageing by reducing the risk of chronic diseases, enhancing cardiovascular health, improving cognitive function, and preserving functional independence, ultimately contributing to a higher quality of life and longevity (1). Integrating physical activity into the daily commute can reduce sedentary transportation time allowing people to use their time more efficiently whilst improving their health (2). Singapore's Land Transport Master Plan 2040 (3) outlines the long-term vision and strategies for leveling up the country's transport infrastructure to make active transportation options such as cycling and walking safer, more accessible and the most convenient choice. This plan includes the expansion of the cycling path network and the addition of covered walkways between MRT stations, residential areas, and amenities. Improving infrastructure reduces many barriers to engaging in physical activity however understanding their viability with the population gives important insight into areas that could improve uptake.

Objective & key questions

To assess opinions, challenges, and innovations for combining transportation and workout activities of Singaporean citizens.

Key findings

There were 202 individuals included in the analyses. 50.5% percent of them were male, 48.5% female, and 1% other or preferred not to say. The median age was 35.5 years. 46.5% of participants were Singaporean, while the rest were expatriates living in Singapore (as shown in the figure).



15% of participants reported being inactive. Furthermore, 29% reported not using active transport, however, 61% of them could be motivated to be more active. For those who already use active transport the main motivators were health benefits (82%), cost-effectiveness (56%), enjoyment (46%), convenience (41%), time-saving (40%), and environmental concerns (35%) However, 66% of them were not encouraged by their employers to use active transport or did not know about it. Based on percentages of individuals who answered yes to the question 'Would you make use of … ?', air-conditioned cycling lanes (78%), a reward app (75%), a squat challenge (70%), and park gyms along travel routes (68%) were the most desirable interventions. After assessing the viability triad, the reward app was first, the park gyms were the second and the stationary bikes at bus stops were the third most viable interventions (as shown in the table below).

Table 1. Results of viability triad assessment

Rank	Intervention	Desirability %* (pts)	Feasibility (pts.)	Sustainability (pts.)	TOTAL
1	Reward app	75 (8)	Very high (9)	Very high (10)	27
2	Park gym	68 (7)	High (8)	High (8)	23
3	Stationary bike	55 (6)	Very high (9)	Moderate (6)	21
4	Squat challenge	70 (7)	Moderate (6)	High (7)	20
5	Resistance exercise	54 (5)	Very high (10)	Low (4)	19
6	AC cycling lanes	78 (8)	Very low (1)	Very low (1)	9

*Proportion of participants who answered yes to the question 'Would you make use of …?

Recommendations

Inhabitants of Singapore can be motivated to combine workouts and active transportation. This can be supported by more encouragement from employers or by implementing interventions such as reward apps, park gyms along travel routes, and stationary bikes at bus stops. It is also important to consider future innovations, like shaded bike routes, safer tracks, accessible shower facilities and air-conditioned cycling lanes.

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MISSION 5: Healthier SG – How well is it understood?

Group members: Bhirau Wilaksono, Deborah Manandi, Lucija Sironic, Michelle Mak, Mohamed Khairizan Bin Mohamed Khair, Rachel Ngu Wen Yi, Tan Yan Er, Vo Nhat Thanh

Mentors: Dr Anna Szuecs, Prof Andrea Maier

Background

The Healthier SG initiative1 is a new national healthcare programme bringing a major transformation to Singapore's healthcare system to promote preventive care. The initiative aims to improve the nation's healthspan and longevity through a multi-pronged approach, namely, (1) family doctors being the first point of contact of preventive care, (2) development of health plans consisting of lifestyle adjustments, vaccinations, and regular health screenings in consultation with patients, (3) involvement of community partners to encourage patient compliance with Healthier SG, and (4) setting up appropriate infrastructure such as IT and financing policy for successful implementation of Healthier SG. By enrolling, individuals will benefit by receiving dedicated care from a preferred family clinic with additional subsidies and rewards for improved health behaviours and lifestyles. On 5 July 2023, registration formally began for any Singaporean or permanent resident aged 60 years or above.

Objectives & Methods

Our city mission aimed to assess the awareness, enrolment rate and knowledge of Singaporeans and permanent residents aged 60 years old and above on Healthier SG. A survey was conducted in the Western region of Singapore. A total of 10 questions were asked, of which 5 were pertaining to respondents' awareness, enrolment status, and perception of Healthier SG, and another 5 were pertaining to their knowledge of Healthier SG. Knowledge questions were only asked from respondents who had heard about Healthier SG and answered on a true-false basis, with correct answers garnering 1 point and incorrect ones 0 point. There was an NA category for respondents who did not give a clear response. The questions were as follows:

1. Under HSG, I am recommended to have 2 family doctors
2. Under HSG, I can enrol with polyclinics
3. After selecting my family doctor, I am not allowed to change family doctors at any point in time.
4. If I am referred to a Specialist Outpatient Clinic by my HSG family doctor, I will not enjoy subsidised care.

Findings

A total of 75 people either declined to participate in the survey, were not surveyed due to language barriers, or were ineligible due to not being Singaporean or a Singapore permanent resident. Out of 117 respondents (55% men, 45% women), 66% were aware of Healthier SG (Figure 1). Respondents mainly heard of Healthier SG through news sources, such as newspapers and online news sources (56%). Following which, 20% of respondents who were aware heard about the programme through official government messages such as SMSes from MOH, or WhatsApp and Telegram messages from Gov.sg. Surprisingly, only 1% of the respondents heard about the programme from their physicians (Figure 2).

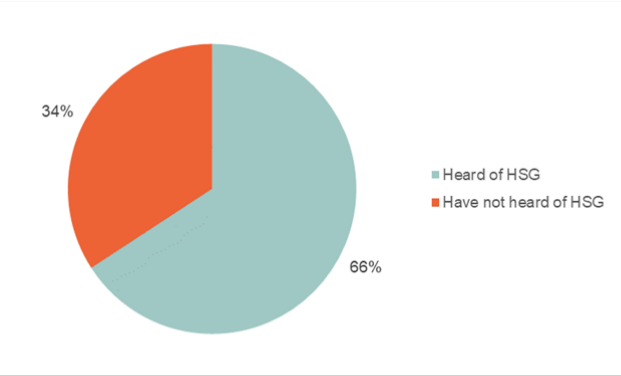

Figure 1: Awareness of Healthier SG

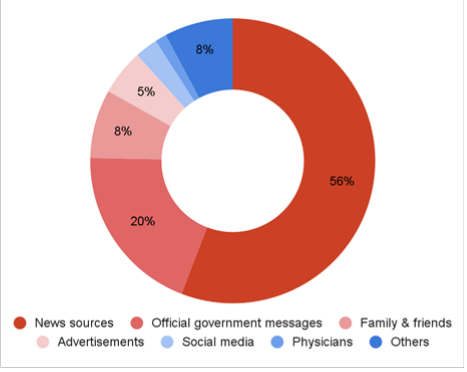

Figure 2: Where respondents heard of HealthierSG

When asked about their enrolment status, only 8% of respondents (n = 9) indicated that they had enrolled in Healthier SG. One in 4 older adults (n = 29) approached were not interested and did not plan to enrol, while 1 in 3 older adults (n = 39) approached intended to enrol in Healthier SG. The main reasons cited for choosing to enrol were the perceived benefits for health, free screenings, vaccinations and additional subsidies, as well as because it was a government programme.

Conversely, the main reason for not enrolling was a lack of interest in the programme. Some respondents felt that the programme was unnecessary as their healthcare needs were already sufficiently met with current healthcare policies, or because they felt they were too old to perform physical activity as advertised by the programme. Some also felt that they were already managing their health well enough on their own. Several respondents had a lack of knowledge or misconceptions about what the programme entailed and how it could benefit them.

The level of knowledge was overall satisfactory, with a mean score of 2.4 points out of maximum 4. The mean knowledge score was lowest in the respondents who did not plan to enrol in the programme, with a mean score of 1.9 points, closely followed by respondents who had already enrolled in the programme, who had a mean score of 2 points. Respondents who intended to enrol in Healthier SG scored the highest, with a mean score of 2.5 points.

One of the key characteristics of Healthier SG is the selection of a single care provider. Yet, only 52% of respondents who have heard of Healthier SG were clear about this point (Figure 3).

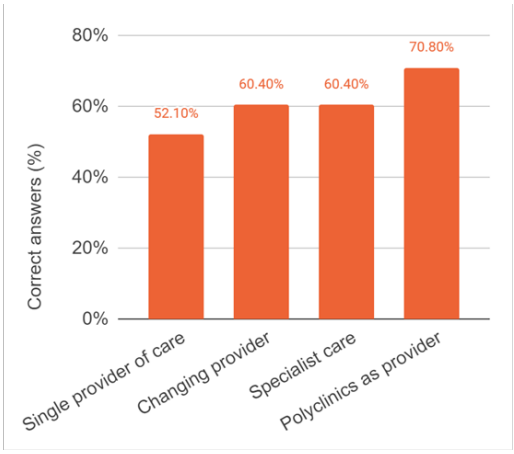

Figure 3: Percentage of correct answers per knowledge statement

Conclusion & Recommendations

Overall, the results suggest that while there is some level of awareness of Healthier SG among Singapore residents aged 60 years and above, there are remaining challenges in terms of enrolment and understanding. As such, we propose a few initiatives to improve these aspects of Healthier SG.

Firstly, we propose enlisting family and friends of older adults to encourage older adults to enrol in the Healthier SG programme. Similar to the COVID vaccination referral programme, family and friends could be incentivised with a HPB e-voucher for every older adult aged 60 years old and above who successfully signs up for the Healthier SG programme.

Secondly, we can encourage clinical staff at GP clinics to act as Healthier SG Ambassadors to touch base with patients aged 60 and above. They will be able to explain the programme in greater detail and encourage older adults to enrol in Healthier SG. Waiting areas in clinics could be leveraged to provide detailed, tailored information to patients.

Lastly, as some older adults felt that they were still healthy or managing their health well enough such that Healthier SG would not be necessary for them, educational campaigns could be run to inform older adults how the preventive healthcare aspects of Healthier SG would still be beneficial in the absence of chronic illnesses. Similarly, campaigns should also target frailer and very old members of society, who may feel that only fit people can benefit from the programme.

Reference

[1]Ministry of Health 2022. Healthier SG - What is Healthier SG? [Online] 2022. https://www.healthiersg.gov.sg/about/what-is-healthier-sg/.

APPENDIX D

Photos


Public Health and Government Perspectives on Longevity Societies
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