



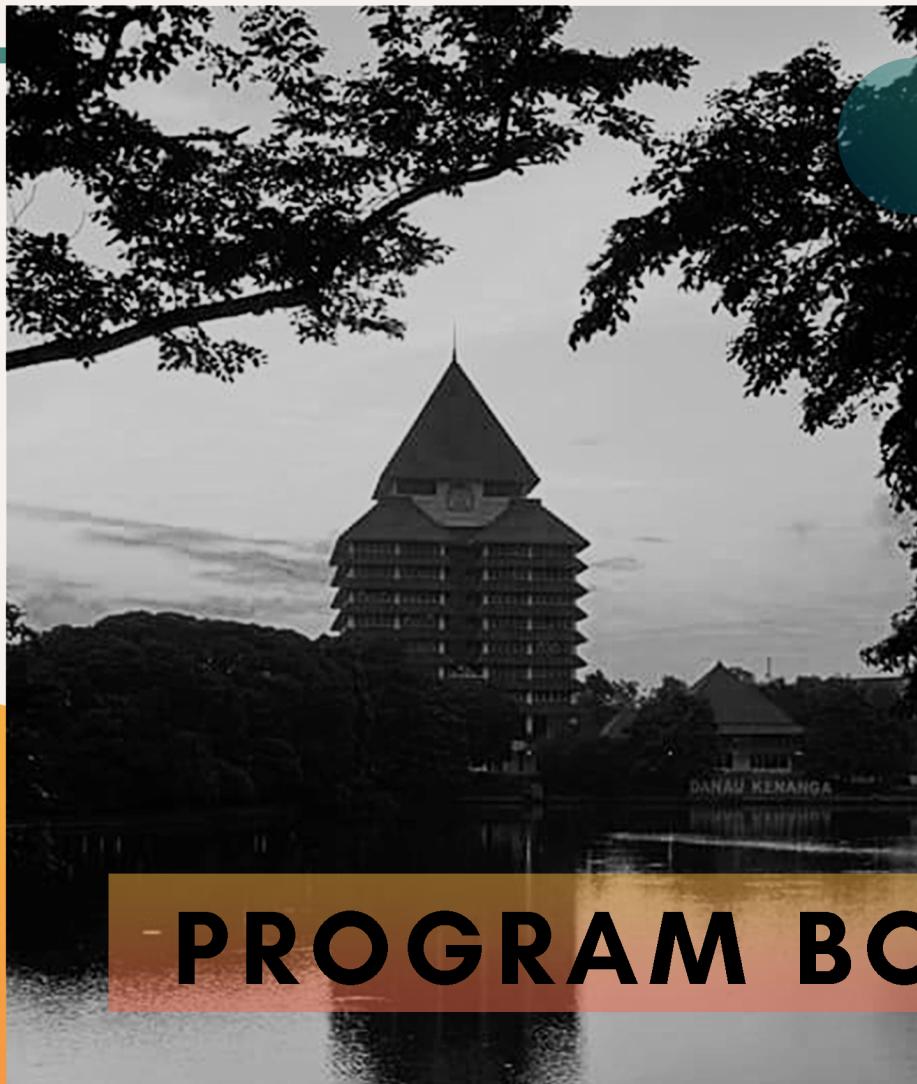
UNIVERSITAS
INDONESIA
Veritas, Probitas, Iustitia

FACULTY OF
PUBLIC
HEALTH



THE 11TH APRU POPULATION AGING VIRTUAL CONFERENCE

7-8 APRIL 2021



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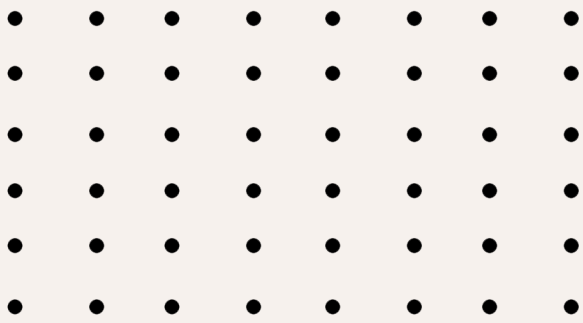
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ABSTRACTS

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WELCOME MESSAGES



DEAR PARTICIPANTS, SPEAKERS, AND COLLEAGUES

Welcome to the 11th APRU Population Aging Virtual Conference. It is an honour for Faculty of Public Health Universitas Indonesia to host this event. During our hard times to survive this pandemic, we are so delighted that scholars still have determination to learn and share knowledge.



Bringing Challenges & Resilience Related to Aging Population: Surviving and Thriving towards Successful Aging as the theme of the conference, we are trying to encourage research on a number of broad themes that not only survive with diminished functions related to aging but new ways to help the elderly develop and overcome limitations and are associated with transitions that change the view of aging from "survive" to "develop". We are aware the growth of the elderly population demands improvement in many sectors. Not only a conducive and supportive environment but also adequate facilities, better health care, and sustainable support system that can help the elderly independent and productive. The 11th APRU Population Aging Virtual Conference is also intended to address challenges and reap opportunities toward population aging.

We offer 9 topics ranging from Economic and Aging Society; Technology and Health Care for Aging; Dementia and Alzheimer; Reproductive Health in Aging Population; Nutrition and Aging; Metabolic Syndrome; Psychosocial Issues in Aging; Population Aging in the COVID-19 Era; and Other Issues and accept 121 abstracts for oral and poster presentations. After the review process, 84 participants from 11 countries will deliver ideas consisting of 46 oral presentations and 38 poster presentations in the conference.

The conference will include plenary and symposium sessions, proffered paper presentations, posters, and video competition. High appreciation is conveyed to the Universitas Indonesia, Faculty of Public Health UI, and APRU for the never-ending supports toward education and research. Gratitude is sent to our honourable resource persons for their commitment and dedication. Lastly, we would like to thank all of the conference participants for their contributions which are the foundation of this conference.

Best wishes,

Prof. Dr. drg. Indang Trihandini, M.Kes

Coordinator, Organizing Committee



DEAR COLLEAGUES, STUDENTS, AND PARTICIPANTS,

It is my pleasure to welcome you to the 11th Asia Pacific Rim Universities Population Aging Virtual Conference, “Challenges and Resilience Related to Population Aging: Surviving and Thriving Towards Successful Aging” organized by the Faculty of Public Health, University of Indonesia.



As a result of decreases in fertility and improvements in extending life expectancy, population ageing is occurring in most countries of the world today. By 2030, 60% of the world’s older population will live in Asia. It is also certain that many Asian countries will grow old before they grow rich. Thus we need effective and sustainable solutions to address issues that come to the fore with population ageing.

Previous research has identified four main themes that are of concern to older adults: Anxiety, Meaning, Disability, and Caregiving. Anxiety can arise around financial, health, social or environmental issues, thus reducing the quality of life of older persons. A loss of meaning or purpose in life decreases an individual’s psychological well-being and capacity to age well. Disability is a major concern for older persons and encompasses issues around metabolic syndrome, management of non-communicable diseases, frailty, and falls, to name a few areas. Finally, the question of “who will take care of me” is one we increasingly hear as families get smaller and older persons live for longer. Each of these themes contain major research areas and include areas that we are only beginning to understand in the Asian context.

A life course perspective is a useful way to determine the elements of ageing well. This perspective also provides guidance for points of intervention to achieve a higher quality of life at older ages. For example, alleviating the anxiety around financial well-being in old age will require better financial planning at earlier stages of the life course. It may also include upgrading one’s skills across the life course to enable working for longer at older ages.

Meaning and purpose at older ages may be gained in various ways. For now, we know that volunteering and life-long learning are associated with better health outcomes, including dementia, at older ages. Building the interest and capability of individuals to volunteer and learn throughout life may predict better outcomes in old age

Decreasing the probability of becoming disabled, or at least delaying the onset of disability, means paying attention to one’s health from early childhood to the end of life. The inter-



action between psychological and physical health is an important nexus to understand because they are so closely intertwined. The probability of becoming frail or disabled can be determined as much by psychological factors, e.g., reluctance to engage in physical activity or rehabilitation, as by physical factors, e.g., metabolic syndrome.

Maintaining a social convoy across one's life course, and good quality intergenerational relationships, can increase the odds that there will be a caregiver available in one's old age. Government policies and programmes play an important role here in supporting caregivers.

The environment also plays a large part in ageing well. New environments can be disorienting and limiting for older adults. However, ageing-in-place can increase familiarity and the probability that older adults will continue to be socially integrated within the community. Technology may also assist by helping older adults maintain their mobility and interaction with their environment as they age.

During this conference we will hear about current research that provides insights into the major topics of metabolic syndrome, dementia, loneliness, falls, and the environment. We will also hear presentations on topics under each of these main themes. I hope that what we learn today will bring us one step closer to developing new research, policies, and programmes to support our older persons to age well, with dignity and grace. I would like to commend and thank the conference organizers for developing a strong programme. I would also like to thank the APRU Secretariat for supporting this conference.

I wish you all a fruitful meeting!

Associate Professor Angelique Chan

Director, APRU Population Ageing Hub



DEAR COLLEAGUES, STUDENTS, AND PARTICIPANTS,

On behalf of APRU, I welcome you to the 11th APRU Population Aging Conference hosted virtually by the University of Indonesia.

The theme of resilience in the face of challenges, of thriving not just surviving, relates not only to aging populations but also resonates with the challenges imposed upon us all by the pandemic. It is a timely topic.

As a network of 56 leading research universities located around the Pacific Rim, from Southeast Asia and Northeast Asia, to the Americas and Australasia, we are uniquely placed to consider this theme from very diverse contexts and to access the depth of research, education and public policy expertise from 18 countries and territories.

The Conference will examine demographic shifts, identify the critical issues and opportunities of population aging, and redefine economic growth in the context of prioritising human well-being over private profit. In this regard, the existential crisis of climate change for vulnerable populations cannot be avoided.

As we have found for the past year, the advantage of a virtual conference is that we are able to open it to a wide range of participants who can interact with expert speakers.

I wish to thank the Rector of the University of Indonesia, Dr Ari Kuncoro, the Faculty of Public Health, the Conference Steering Committee, and the organizing team for hosting this conference despite the uncertainties of COVID-19.

I also thank Professor Angelique Chan from the National University of Singapore who has taken over the leadership of this important APRU initiative as well as the APRU Population Aging Program Steering Committee for their continuing efforts.

With very best wishes for a productive and successful conference.

Dr. Christopher Tremewan
Secretary General, APRU



DEAR COLLEAGUES AND PARTICIPANTS,

It gives me a great pleasure to welcome you to the Faculty of Public Health Universitas Indonesia (FPH UI) campus.

As Indonesia's leading higher institution in public health, FPH UI has determined our vision to be the centre of excellence for knowledge, technology, public health education, and actively involved in the development of public health profession and improvement of health status in both Indonesia and Asia.

In its journey, FPH UI has made efforts; one of them is through research activities that produce high-quality, creative, innovative, and compelling scientific work. The activities carried out aim to encourage and strengthen the development of existing sciences and new sciences and studies in the monodisciplinary, multidisciplinary, interdisciplinary, and trans-disciplinary fields in order to answer the challenges of increasingly complex life problems.

In line with this, Faculty of Public Health Universitas Indonesia is delighted to host The 11th APRU Population Aging Virtual Conference 2021. We are aware the growth of the elderly population has stimulated the growth of the institutional and home care industry, which often creates an increasingly greater demand for providing services for the elderly who need help to maintain an independent lifestyle. It is our objectives this conference could provide a platform to engage with government and enterprise, and to support capacity building to improve the capacity of nations to deal with this aging challenge, raise awareness about the demographic shifts towards older populations, and provide policy makers with the evidentiary base for policy making, ensuring aging issues and the transition to an aged society does not hamper economic growth and overall quality of life of people in the region

We thank APRU for the trust in holding this conference, The Rector of Universitas Indonesia for the best support, the committees who always show their best effort, and of course our valuable participants. Your outstanding contribution is highly appreciated.

Have a great experience, everyone. Your knowledge, ideas, and hard work are the keys for our bright future.

Warmest regards,

Prof. Dr. dr. Sabarinah, M.Sc.

Dean, Faculty of Public Health Universitas Indonesia



SELAMAT DATANG,

Universitas Indonesia warmly welcomes all participants, attendees, speakers, and honourable guests to The 11th APRU Population Aging Virtual Conference 2021.



International-standard activities that are followed or organized by Universitas Indonesia are a manifestation of the university's vision to become the centre for excellent and competitive science, technology, and culture through efforts in educating the nation's life to improve people's welfare to contribute to the development of Indonesian society and the world. Faculty of Public Health has been actively involved through their actions and programs to achieve this. Various national and international conferences are held by FPH UI following one of UI's missions to carry the quality of Tri Dharma activities, which is to foster education, research, and social service activities, and are relevant to national and global challenges. The 11th APRU Population Aging Virtual Conference 2021 is one of them.

The event is also so much in accordance with the UI's mission to conduct the Tri Dharma that is capable to meet the national and global challenges toward industry 4.0 or disruptive era. Universitas Indonesia (UI) itself has determined to be a world class research university who sets its commitment to the academic invention and research activities through various scientific programs. As UI focus on research and innovation 2020 – 2024, the first focus on Health and Wellbeing which one of the main research areas is healthy aging. Therefore, through this conference, it is expected that there will be collaboration research between APRU members in elderly health research. UI would like to nurture the students to take part early as possible in facing current healthy aging issues and challenges as we realize we are counting our future to them.

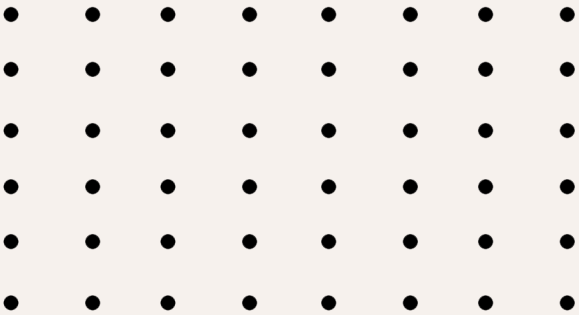
We wish you a productive conference as you become our upcoming leaders of the world. Grow ideas, gain knowledge and experience, build a network, and develop a better world.

Sincerely,

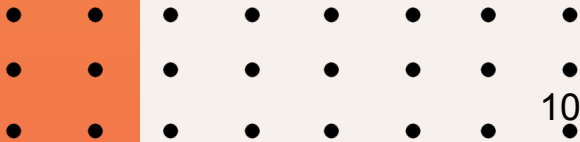
Prof. Ari Kuncoro, S.E., M.A., Ph.D

Rector, Universitas Indonesia





THE BOARDS



INTERNATIONAL ADVISORY BOARD

1. Associate Prof. Angelique Chan (Program Director, National University of Singapore)
2. Prof. Gong Chen (Peking University)
3. Prof. Eileen Crimmins, PhD (University of Southern California)
4. Emeritus Prof. Robert Cumming (The University of Sydney)
5. Prof. Stuart Gietel-Basten, PhD (Hong Kong University of Science and Technology)
6. Prof. Lan Liu (Peking University)
7. Associate Prof. Xiaoting Liu (Zhejiang University)
8. Prof. Peter McDonald (The University of Melbourne)
9. Prof. Hiroki Nakatani (Keio University)
10. Prof. John Piggott (UNSW Sydney)
11. Christina Schönleber (APRU International Secretariat)



STEERING COMMITTEE



1. Prof. Ari Kuncoro, SE, MA, Ph.D
(Rector, Universitas Indonesia)
2. dr. Agustin Kusumayato, M.Sc, Ph.D
(University Secretary, Universitas Indonesia)
3. drg. Nurtami, Ph.D, Sp.OF(K)
(Vice Rector for Research and Innovation, Universitas Indonesia)
4. drg. Baiduri Winarko, M.KKK, Ph.D
(Head of International Office, Universitas Indonesia)
5. Prof. Dr. dr. Sabarinah B. Prasetyo, M.Sc
(Dean, Faculty of Public Health Universitas Indonesia)
6. Dr. Ir. Asih Setiarini, M.Sc
(Vice Dean for Education, Research, and Student Affairs, Faculty of Public Health Universitas Indonesia)
7. Prof. dr. Asri C. Adisamita, MPH, Ph.D
(Vice Dean for Human Resource, Venture, and General Administration, Faculty of Public Health Universitas Indonesia)

SCIENTIFIC COMMITTEE

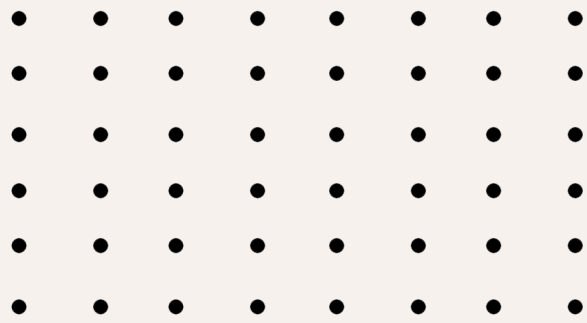


1. Prof. Dr. dr. Sudijanto Kamso, SKM
2. Prof. Dr. dr. Meily Kurniawidjaja, M.Sc, SpOK
3. Prof. Dr. dr. Ratna Djuwita, MPH
4. Prof. Dr. dr. Meiwita Paulina Budiharsana, MPA, Ph.D
5. Prof. dr. Hadi Pratomo, MPH, Dr.PH
6. Prof. Dr. dr. Sudarto Ronoatmodjo, SKM, M.Sc
7. dr. Hasbullah Thabrany, MPH, Dr.PH.
8. Prof. dr. Haryoto Kusnoputranto, M.D., DrPH
9. Prof. Dr. dra. Ratu Ayu Dewi Sartika, Apt, M.Sc

ORGANIZING COMMITTEE

1. Prof. Dr. drg. Indang Trihandini, M.Kes
2. Indri Hapsari Susilowati, SKM, MKKK, PhD

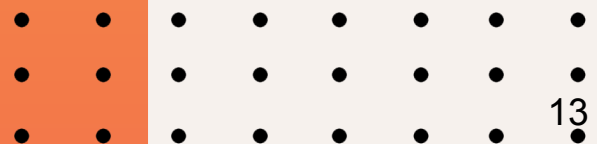




PROFILE OF ORGANIZER

&

CO-ORGANIZER





ORGANIZER

FACULTY OF PUBLIC HEALTH

The Faculty of Public Health Universitas Indonesia (FPH UI) was established by Doctor Mochtar, the head of the Department of Public Health and Medical Community, Faculty of Medicine Universitas Indonesia. In collaboration with USAID, the first program offered was Bachelor of Public Health which equals Master of Public Health.

Referring to the Ministry of Higher Education and Science Decree No. 26 of 1965 dated on February 26, 1965, it is determined that the Faculty of Public Health was established under Universitas Indonesia. In accordance with the Ministry of Higher Education and Science Decree No. 153 of 1965, the Faculty of Public Health Universitas Indonesia (FPH UI) was formally established on 1 July 1965.

In 1989, the public health degree program was opened to fulfil the requisite as a faculty in relevance to education law in Indonesia. Hereafter, since 1990 FPH UI offered a Master program in Public Health science followed by Master program in Hospital Administration Study, Epidemiology, Occupational Health and Safety. In 1994, FPH UI opened Diploma III program (a 3-year vocational program after secondary high school in various health disciplines). Nevertheless, the program was closed in 2004 to foster the university vision to promote research and become a world-class university.

Since 2013, FPH UI has been developed as a legal institution who offers public health study for bachelor, master, and doctoral programs with 10 study programs, 7 departments, 2 study groups, and research centres. As the oldest faculty of public health in Indonesia, FPH UI will always do improvement and evaluations to be a nation's leading institution on public health.



VISION AND MISSION

VISION

Supporting Universitas Indonesia vision to be the centre of science and technology development, creating a world-class public health education as well as actively involving on public health profession advancement and health development in Indonesia and Asia.

MISSION

- Establishing FPH UI as the centre of characters, morality, ethics, and Indonesian cultures development through its education program which oriented to integrity, knowledge, intellectuality, professionalism and social empathy.
- Establishing FPH UI as the centre of health science and technology development through its research activities which generating scientific works with excellence qualification, creative, innovaative and beneficial values.
- Establishing FPH UI as a leading institution on national and regional health development through its active participation by supporting society abilities and efforts in order to solve various health problems and challenges .

DEPARTMENTS AND STUDY GROUPS

FPH UI owns 7 departments and 2 study groups which conduct education, research, and community engagement activities.

DEPARTMENTS:

1. Department of Health Policy and Administration
2. Department of Biostatistics and Population Studies
3. Department of Epidemiology
4. Department of Public Health Nutrition
5. Department of Environmental Health
6. Department of Occupational Health and Safety
7. Department of Health Education and Behavioural Sciences

STUDY GROUPS

1. Reproductive Health
2. Healthcare Quality





STUDY PROGRAMS

With approximately 2500 students each year, FPH UI offers 10 study programs ranging from Undergraduate to Postgraduate Programs. The Undergraduate Programs consist of Bachelor of Public Health, Bachelor of Nutrition, Bachelor of Environmental Health, and Bachelor of Occupational Health.

The Postgraduate Master Programs comprises of Masters of Public Health, Masters of Epidemiology, Master of Hospital Administration, and Masters of Occupational Health and Safety. The Postgraduate Doctor Programs include Doctor of Public Health and Doctor of Epidemiology.

As the leading faculty in public health that understands the importance of professional resources to answer the challenge related to well-being and elderly, Faculty of Public Health Universitas Indonesia opens a new major in Masters of Public Health i.e., Elderly Health major.



PROGRAM STUDI MAGISTER KESEHATAN MASYARAKAT

PEMINATAN KESEHATAN LANJUT USIA



Deskripsi Program

Di Indonesia lanjut usia menurut UU Nomor 13 Tahun 1998 adalah seseorang yang berusia diatas 60 tahun. Dengan memperhatikan piramida penduduk Indonesia di thn 1971 dengan tahun 2019, persentasi lansia di Indonesia pada tahun 2019 meningkat dua kali lipat, menjadi sekitar 9.6%. Badan Pusat Statistik memproyeksikan, jumlah penduduk lanjut usia (60+) diperkirakan akan meningkat menjadi 28.8 juta jiwa pada tahun 2020, menjadi 33,7 juta jiwa pada tahun 2025 dan 48,2 juta jiwa tahun 2035.

Secara biologis, proses penuaan berarti menurunnya daya tahan fisik yang ditandai dengan semakin rentannya terhadap serangan berbagai penyakit yang dapat menyebabkan kematian. Kemunduran fisik dan mental yang dialami lansia sangat mempengaruhi kondisi kesehatannya. Oleh karenanya, kesehatan menjadi salah satu masalah yang mendasar bagi lansia. Pemeliharaan kesehatan lansia seharusnya mengutamakan promotif preventif, advokasi dengan dukungan pelayanan kuratif dan rehabilitatif yang berkualitas di fasilitas kesehatan.

Kompetensi Khusus Lulusan Peminatan Kesehatan Lanjut Usia

1. Mampu mengevaluasi berbagai strategi promosi dan advokasi terkait kesehatan lansia dengan mempertimbangkan aspek sosial budaya
2. Mampu menganalisis masalah kesehatan lanjut usia dan melakukan intervensi
3. Mampu melakukan pemberdayaan berbasis masyarakat dan rehabilitasi di bidang kesehatan lanjut usia.
4. Mampu menerapkan konsep dan dinamika hubungan antar manusia dalam menjalin jejaring dan kerjasama dengan mitra dalam promosi dan advokasi kesehatan lanjut usia

Prospek Lulusan Peminatan Kesehatan Lanjut Usia

1. Tenaga kesmas dan surveilans kesehatan lansia
2. Penyuluh kesehatan lansia
3. Dosen, peneliti, tenaga pengajar/pelatih, konsultan
4. Pengembangan "Silver College"/Universitas Ramah Lansia dan *Life Long Learning*
5. Tenaga K3 pengembangan fasilitas dan kawasan ramah lansia
6. *Manager Center For Active Ageing/Community based Integrated Center For Elderly*
7. Tenaga kesmas di berbagai instansi pemerintah, FKTP, Senior Living, Residensial dan Wahana PJP bagi lansia
8. Konsultan gizi bagi lansia

Sektor yang Memerlukan Lulusan Peminatan Kesehatan Lanjut Usia

1. Institusi pelayanan kesehatan
2. Institusi pelayanan sosial
3. LSM –LSM yang bergerak dibidang pelayanan kesehatan dan sosial

Struktur Mata Kuliah

Program Magister Kesehatan Masyarakat peminatan Kesehatan Lanjut Usia ditempuh dalam 4 (empat) semester dengan jumlah SKS sebanyak 40 SKS. Selain mengikuti perkuliahan dengan mengambil mata kuliah, mahasiswa harus menyelesaikan Publikasi dan Tesis. Perkuliahan dilakukan dengan metode tatap muka atau daring (menyesuaikan dengan kondisi pandemi COVID-19).

Mata Kuliah Wajib Fakultas

1. Biostatistika Intermediate
2. Epidemiologi Intermediate

Mata Kuliah Wajib Program Studi

1. Kepemimpinan Strategis dan Berpikir Sistem
2. Lingkungan dan Kesehatan Global
3. Promosi Kesehatan Intermediate
4. Metodologi Penelitian Kuantitatif
5. Metodologi Penelitian Kualitatif
6. Manajemen Data Intermediate
7. Manajemen dan Kebijakan Kesehatan
8. Penulisan Ilmiah
9. Publikasi
10. Tesis

Mata Kuliah Wajib Peminatan

1. *Hormonal and Physiological Changes in Aging*
2. *Non-Communicable Diseases in the Elderly (CVD, Metabolic, Dementia, Fall)*
3. *Communicable Diseases and Immunity in the Elderly*
4. *Quality of Life (Physical Activity and Nutrition)*
5. *Successful Aging (Physical, Psychological, Sociological)*
6. *Health Care and Population Dynamic in the Elderly*
7. *Field Study*

Penerimaan Mahasiswa Baru

Penerimaan calon mahasiswa Pascasarjana Universitas Indonesia melalui Seleksi Masuk Universitas Indonesia (SIMAK UI). Adapun jadwal penerimaan mahasiswa baru untuk tahun 2021 adalah:

1. SIMAK UI Gasal Gelombang 1*

Pendaftaran: 8 Februari - 8 Maret 2021
Ujian: 21 Maret 2021
Pengumuman: 23 April 2021

2. SIMAK UI Gasal Gelombang 2*

Pendaftaran: 7 Juni - 9 Juli 2021
Ujian: 18 Juli 2021
Pengumuman: 16 Agustus 2021

*Silakan cek di penerimaan.ui.ac.id atau simak.ui.ac.id jika terjadi perubahan tanggal SIMAK UI.

Pertanyaan yang sering diajukan calon mahasiswa baru silakan kunjungi halaman FAQ FKM UI di www.fkm.ui.ac.id/faq-calon-mahasiswa

Persyaratan Calon Mahasiswa

1. Memenuhi persyaratan UI (lulusan S-1 segala jurusan/ multidisiplin, atau lulusan D4 bidang kesehatan, mendaftar secara online dan lulus ujian SIMAK UI)
2. Kekhususan/peminatan dibuka jika jumlah peserta minimal 5 (lima) orang
3. Calon mahasiswa harus memiliki gelar sarjana dari program studi yang terakreditasi BAN PT/LAM-PTKes
4. Pilihan program studi dan peminatan hanya dilakukan saat pendaftaran, setelah mendaftar ulang mahasiswa tidak diperkenankan untuk pindah program studi atau peminatan

Hubungi Kami

Jika memerlukan informasi lebih lanjut, silakan hubungi:

Kelompok Studi Kesehatan Reproduksi

Fakultas Kesehatan Masyarakat Universitas Indonesia

Gedung B Lantai 3, Kampus UI, Depok, Jawa Barat, Indonesia

Sdri. Tuti - 081389887379

Sdr. Adi - 08158801968





RESEARCH AND VENTURE CENTRES

1. Centre for Health Research
 2. Centre for Environmental and Industrial Health Studies
 3. Centre for Health Economics and Policy Studies
 4. Centre for Nutrition and Health Studies
 5. Centre of Occupational Health and Safety Assessment and Implementation
 6. Family Welfare Research Centre
 7. Centre for Health Administration and Policy Studies
 8. Centre for Biostatistics and Health Informatics Studies
 9. Positive Deviance Research Centre
 10. Centre for Education and Community Services
 11. Indonesia One Health University Network
- 

STAFFS

The FPH UI human resource consists of academic staff (lecturers) and administration staff as the supporting staff. In order to enrol its education program, FPH UI has 103 academic staffs which 73% are doctors and 37% are masters. On the other hand, to serve 2500 students each year, FPH UI is supported by 118 administration staff.





CO-ORGANIZER

ABOUT APRU

As a network of leading universities linking the Americas, Asia and Australasia, the Association of Pacific Rim Universities (APRU) is the Voice of Knowledge and Innovation for the Asia-Pacific region. We bring together thought leaders, researchers, and policy-makers to exchange ideas and collaborate on effective solutions to the challenges of the 21st century.

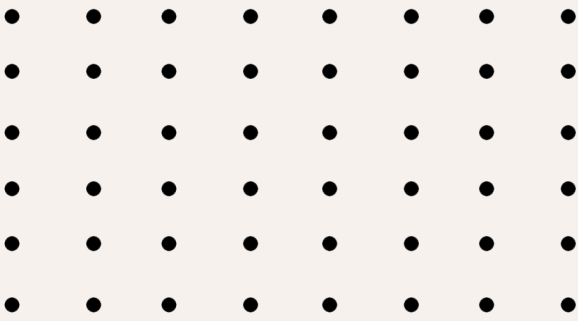
We leverage collective education and research capabilities of our members into the international public policy process. Our primary research areas include natural hazards & disaster risk reduction, women in leadership, population aging, global health, sustainable cities, artificial intelligence & the future of work, the Pacific Ocean, and labor mobility.

HISTORY

APRU was established in Los Angeles in 1997 by the presidents of UCLA, Berkeley, Caltech and the University of Southern California (USC). It now has a membership of the presidents of 56 leading research research universities from around the Pacific Rim. This includes 200,000 academic staff and 2 million students.

Seeing the rapid economic integration of the region and the formation of APEC, the founding presidents' vision was to establish a premier alliance of research universities as an advisory body to international organisations, governments and business on the development of science and innovation as well as on the broader development of higher education. The vision now encompasses focusing new knowledge on the global challenges affecting the region.





PROGRAMS



CONFERENCE PROGRAM DAY 1

Wednesday, 7 April 2021

Time Western Indonesia Time/GMT +7	Programs	Zoom Link
08.10 - 08.20	Opening and Remarks Opening Ceremony	https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZ-BQnZQb1YvOWRWUT09 Meeting ID: 978 8991 4528 Passcode: aprupac21
08.20 - 08.45	Remarks <ul style="list-style-type: none">● Prof. Dr. drg. Indang Trihandini, M.Kes <i>Coordinator of Organizing Committee</i>● Dr. Christopher Tremewan <i>Secretary General, APRU</i>● Prof. Dr. dr. Sabarinah, M.Sc <i>Acting Dean, Faculty of Public Health UI</i>● Prof. Ari Kuncoro, SE, MA, PhD <i>Rector, Universitas Indonesia</i>● dr. Agustin Kusumayati, M.Sc, PhD <i>Secretary University, Universitas Indonesia</i>	
08.45 - 09.00	Recognition of APRU Population Aging Associate Professor Angelique Chan <i>Program Director, APRU Population Aging</i>	
09.00 - 09.20	Keynote Speech 1 Prof. Dr. Hiroki Nakatani <i>Professor, Keio University, Japan ;</i> <i>ERIA (Economics Research Institute for ASEAN)</i> "Ageing Asia: Lesson and Possibility of Collaboration"	
09.20 - 10.40	Plenary 1: Metabolic Syndrome <ul style="list-style-type: none">● Prof. Dr. dr. Sudijanto Kamso, SKM <i>Professor, Faculty of Public Health UI</i> "Metabolic Syndrome in Public Health Perspective"	

Time Western Indonesia Time/GMT +7	Programs	Zoom Link
09.20 - 10.40	<ul style="list-style-type: none"> ● dr. Hasbullah Thabrany, MPH, Dr.PH <i>Indonesian National Health Insurance</i> "JKN and Ageing Indonesia" ● dr. Nafsiah Mboi, SpA, MPH <i>Former Minister of Health; Institute for Health Metrics and Evaluation (IHME)</i> "The Metabolic Syndrome: A Challenge to Clinical and Public Health" <p>Moderator Prof. Dr. dr. Ratna Djuwita, MPH <i>Professor, Faculty of Public Health UI</i></p>	<p>https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZ-BQnZQb1YvOWRWUT09</p> <p>Meeting ID: 978 8991 4528 Passcode: aprupac21</p>
10.40 - 11.45	<p>Symposium 1: Dementia and Long Term Care</p> <ul style="list-style-type: none"> ● DY Suharya <i>Director of Alzheimer;s Disease International (ADI) Asia Pasific Region</i> "Dementia in the Asia Pacific Region" ● Dr. dr. Czeresna Heriawan Soejono, Sp.PD, K.Ger., M.Epid <i>Faculty of Medicine UI</i> "Dementia, It Is Not Just Cognitive Decline" ● Dr. Vasoontara Yiengprugsawan <i>Senior Research Fellow, CEPAR ARC Center of Excellence in Population Ageing Research</i> "Depressive Symptoms Among Caregivers for Older Person: Implications for Long-Term Care in Asia" <p>Moderator Prof. dr. Hadi Pratomo, MPH, DrPH <i>Professor, Faculty of Public Health UI</i></p>	

Time Western Indonesia Time/GMT +7	Programs	Zoom Link
10.40 - 11.45	<p>Symposium 2: Loneliness</p> <ul style="list-style-type: none"> ● Prof. Dr. dr. Meily Kurniawidjaja, M.Sc, SpOK <i>Professor, Faculty of Public Health UI</i> "Loneliness in Elderly during Pandemic of COVID-19, Why it Matters and What Should We Do" ● Dr. dr. Martina Wiwie Nasrun, Sp.KJ(K) <i>Faculty of Medicine UI</i> "Increasing Loneliness in Indonesian Elderly: A Psychosocial Impact of Pandemic COVID-19" ● Prof. Dr. Budi Anna Keliat. S.Kp., M.AppSc <i>Professor, Faculty of Nursing UI</i> "Effectiveness of Mental Health and Psychosocial Support (MHPSS) on Reduction Loneliness and Enhancing Psychosocial Developmental Task of Elderly During Pandemic COVID-19" <p>Moderator Prof. Dr. dr. Sudarto Ronoatmodjo, SKM, MSc <i>Professor, Faculty of Public Health UI</i></p>	<p>https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZ-BQnZQb1YvOWRWUT09</p> <p>Meeting ID: 978 8991 4528 Passcode: aprupac21</p>
10.40 - 11.45	<p>Symposium 3: Fall</p> <ul style="list-style-type: none"> ● Indri Hapsari Susilowati, SKM, MKKK, PhD <i>Faculty of Public Health, UI</i> "I-FRAT (Indonesian Fall-Risk Assessment Tools) to Predict Fall Risk for Indonesian Older Adults" 	

Time Western Indonesia Time/GMT +7	Programs	Zoom Link
10.40 - 11.45	<ul style="list-style-type: none"> ● Prof. Dr. Tan Maw Pin <i>Professor, University of Malaya, Malaysia</i> "Falls in Malaysia" ● Prof. Supa Pengpid, M.Sc., MBA., DrPH <i>Professor, Mahidol University, Thailand</i> "Fall Prevention and Management Interventions: Selected Examples for ASEAN Countries" <p>Moderator Prof. Haryoto Kusnoputranto, MD, DrPH <i>Professor, Faculty of Public Health UI</i></p>	<p>https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZ-BQnZQb1YvOWRWUT09</p> <p>Meeting ID: 978 8991 4528 Passcode: aprupac21</p>
11.45 - 11.50	<p>Closing Day 1 Prof. Dr. drg. Indang Trihandini, M.Kes <i>Coordinator of Organizing Committee</i></p>	

CONFERENCE PROGRAM DAY 2

Thursday, 8 April 2021

Time Western Indonesia Time/GMT +7	Programs	Zoom Link
08.45 - 09.00	Opening (MC) Video Recap of Day 1	https://zoom.us/j/94231662819?pwd=OTJvYlFRTzlicjBUZUZGaFVZOW-dRUT09 Meeting ID: 942 3166 2819 Passcode: aprupac21
09.00 - 09.20	Keynote Speech 2 Prof. Yudho Giri Sucahyo, S.Kom., M.Kom., Ph.D. CISA, CISM <i>Head of Smart City Study, Faculty of Computer Science UI</i> "Smart City for Ageing Population"	
09.20 - 10.50	Poster Presentation https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	
09.20 - 10.50	Oral Presentation <ul style="list-style-type: none">● OP-A Nutrition and Aging & Metabolic Syndrome● OP-B Economic and Aging Society & Technology and Health Care for Aging● OP-C Dementia and Alzheimer● OP-D Population Aging in the COVID-19 Era● OP-E Psychosocial Issues in Aging● OP-F Other Issues 1● OP-G Other Issues 2	



Time Western Indonesia Time/GMT +7	Programs	Zoom Link
10.50 - 11.50	Closing Day 2 Award Announcement & Closing Remark Prof. Dr. dr. Sudijanto Kamso, SKM <i>Professor, Faculty of Public Health UI</i>	https://zoom.us/j/94231662819?pwd=OTJvY1FRTzlicjBUZUZGaFVZOW-dRUT09 Meeting ID: 942 3166 2819 Passcode: aprupac21





THE SPEAKERS



**Prof. Dr. Hiroki
Nakatani**



**Prof. Dr. Sudijanto
Kamso, SKM**



**dr. Nafsiah Mboi,
SpA, MPH**



DY Suharya



**dr. Hasbullah Thabrany,
MPH., Dr.PH**



**Dr. dr. Martina Wiwie
Nasrun, SP.KJ(K),**



**Dr. Vasoontara
Yiengprugsawan**



**Dr. dr. Czeresna Heriawan
Soejono, Sp.PD.,
K.Ger., M.Epid.,**



**Prof. Dr. dr. Meily
Kurniawidjaja,
M.Sc, SpOK**





THE SPEAKERS



**Prof. Dr. Budi Anna
Keliat, S.Kp.,
M.AppSc**



**Indri Hapsari Susilowati,
S.K.M., M.K.K.K.,
Ph.D**



Prof. Dr. Tan Maw Pin



**Prof. Yudho Giri Sucahyo,
S.Kom., M.Kom., Ph.D.
CISA, CISM**



**Prof. Supa Pengpid,
M.Sc., MBA., Dr.PH**



DAY 1

KEYNOTE SPEECH 1

“Ageing Asia: Lesson and Possibility of Collaboration”

Date : 7 April 2021

Time : 09.00 – 09.20

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Hiroki Nakatani

*Project Professor, Global Research Institute of Keio University, and Senior-Advisor,
Economic Research Institute for ASEAN and East Asia (ERIA)*

Japan is aging rapidly, and its society is changing. Many Asian countries are also aging at speed, often exceeding Japan. Population aging and social change are mutually linked and appear to form a vicious cycle. Post-war Japan started to invest intensively in infectious disease control by expanding health services and achieving universal coverage of medical insurance in 1961. The year 2021 is the 60th anniversary. The high economic growth in the 1960s contributed to generate a thick layer of the middle class. Still, the lingering economic slump after the financial bubble crisis after 1991 and globalization weakened this society segment. However, under such an economic environment, Japan has expanded social security for every citizen over the previous three decades but gradually faced challenges due to health and social disparities. The on-going COVID-19 pandemic accelerates the on-going trends as well as amplifies the weakness of society. However, we can turn the challenges into opportunities.

In Keynote Speech 1, the following points will be discussed.

- 1 Japanese “Future Back” approach to Super-Active Ageing Society
- 2 Deep-Impact of COVID-19
- 3 Need for Enhancing Resilience and Innovation
- 4 World now and in 2050
- 5 Possibility of Collaboration: Global, Regional and Bilateral Platforms

PLENARY 1

METABOLIC SYNDROME

“Metabolic Syndrome in Public Health Perspective”

Date : 7 April 2021

Time : 09.20– 09.40

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Dr. dr. Sudijanto Kamso, SKM

Professor, Faculty of Public Health UI

There is an increasing prevalence of chronic disease, including metabolic syndrome in Indonesian older persons. Using Riskesdas (Riset Kesehatan Dasar/Basic Health Research, done by LIT-BANGKES (Center of Health Research and Development (MOH RI) in 2013, an analysis was conducted to determine factors related to metabolic syndrome in the elderly. Total respondents were 5787 elderly, aged 60 years and older.

In general elderly women had higher prevalence of metabolic syndrome than elderly men, 36.5% in women and 18.7% in men respectively. Logistic Regression analysis results showed that body mass index, physical activity were significant factors of metabolic syndrome. And metabolic syndrome and physical activity were significant factors of type 2 diabetes mellitus

The results show the importance of routine plasma lipid tests and anthropometric measurements in promoting continuing health of elderly patients.

Key words:

Body mass index, metabolic syndrome, physical activity, type 2 diabetes mellitus, Elderly, Indonesia.

“JKN and Ageing Indonesians”

Date : 7 April 2021

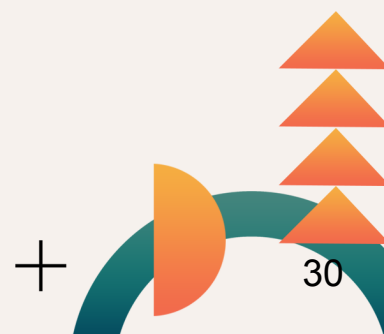
Time : 09.40– 10.00

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : dr. Hasbullah Thabrany, MPH, Dr.PH

Chairman of the Indonesian Health Economist Association, Health Economic Experts of the Center for Health Economics and Health Policies, Universitas Indonesia.

As the World is experiencing demographic transitions, Indonesian population is also ageing society. In 2020, there are 28.8 million elderly Indonesia aged 60+ years. In Indonesia, the definition of elder under current law is 60 years of age and older. This number is more than the total Australian people. It is unimaginable if all Australian people are elderly. Despite a blessing of having long-life, social and health problems accompany ageing society. Current claim data of the Indonesian National Health Insurance (JKN) demonstrate that elderly population is 2-3 times more likely to have inpatient rates compared to productive ages of 30 years of age. Current claim data already indicate that around 30% of total claim amounts are for chronic diseases such as cardiovascular, hypertension, and diabetes mellitus. The JKN is designed to ensure everyone in Indonesia gets access and gets medical care according to their medical needs. While the right to healthcare is guaranteed for all Indonesian elderly, financing and access to medical care remain inequitable. Those who have formal works or pensions, such as government employees have higher access and higher utilization of medical care because they are covered by the JKN and they live in urban, large cities. The elderly of the informal sector are much less fortunate. The Indonesian government has huge challenges to ensure every elderly get health care they need. This paper will explain current challenges and proposed solutions to overcome the current financing and delivery problems.



"The Metabolic Syndrome : A Challenge to Clinical and Public Health"

Date : 7 April 2021

Time : 10.00– 10.20

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : dr. Nafsiah Mboi, SpA, MPH

Former Minister of Health, Institute for Health Metrics and Evaluation (IHME)

The Metabolic Syndrome (MetS) affects many age groups but becomes particularly evident in people of late middle age and the elderly, increasing the challenge of "successful ageing" for many. It is a multifaceted and complex condition reducing the quality of life for those affected and imposing major demands on the health system as a result of the high cost and often long term treatment required by the diseases and disabilities attributable to the MetS .

While component parts of the metabolic syndrome have long been known, it is only in the 21st century that the relationships among the components and their impacts began to be noted and examined. While much of the literature of the past 10 years discusses the components and associated disease/ disability of MetS, there is still much that is unknown and unexplored about prevention, treatment, and policy needs related to the individual components of the syndrome as well as the syndrome as a whole.

The Global Burden of Disease Study (GBD) is a valuable resource for study, reflection, and analysis in the field of health. The GBD consists of a periodic, systematic collection and analysis of health and other data resulting in findings on death, years of life lost (YLLs), years of life in disability (YLDs), and disability adjusted life years (DALYs) related to the diseases, injuries, impairments, and risk factors studied. In 2019 data is provided on 87 metabolic, behavioral, and environmental & occupational risk factors and 371 diseases, injuries, and impairments in 204 countries. With reference specifically to risk factors, the 2019 GBD provides a "standardized and comprehensive assessment of the magnitude of risk factor exposure, relative risk and attributable burden of disease"¹

Today's presentation will use selected data from GBD 2019 to highlight the trends relevant to MetS of the past 3 decades : the increases in communicable and non-communicable diseases (NCD's) including those NCDs attributable to specific, metabolic and behavioral risk factors. The data provides indisputable evidence of the urgency of more research and action to move from recognition to better understanding and management of the Metabolic Syndrome, improving our capacity to save human lives and increase effectiveness and efficiency of public policy. Response to MetS, particularly aiming to benefit the elderly, will need a life span approach and mobilization of multisectoral collaboration especially for effective prevention and improvement in quality of life.

The presentation will conclude with some recommendations for action and operational



SYMPOSIUM 1

DEMENTIA

“Dementia in The Asia Pacific Region ”

Date : 7 April 2021

Time : 10.40 – 10.55

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOVRWUT09>

Speaker : DY Suharya

Regional Director of Alzheimer’s Disease International (ADI) Asia Pacific Region;

Founder of Alzheimer’s Indonesia

There are 50 million people with dementia in the world, 23 million in the Asia Pacific Region and 1.2 million in Indonesia. The Global Action Plan on the Public Health Response to Dementia 2017-2025 was adopted by World Health Organization (WHO) All Member States at the 70th World Health Assembly in May 2017 including all countries in the Asia Pacific region. Alzheimer's Disease International Asia Pacific Regional Office with 20 members in the region including Alzheimer's Indonesia are committed to support the seven action areas of the Global Dementia Action Plan by strengthening partnerships to act and ensure effective implementation of the plan for the improvement of quality life of people with dementia and family carers. The presentation will highlight the seven action areas of the Global Action Plan in the Asia Pacific region and the reason why we all need to do more.

“Dementia, It Is Not Just Cognitive Decline”

Date : 7 April 2021

Time : 10.55 – 11.10

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Dr. dr. Czeresna Heriawan Soejono, Sp.PD., K.Ger., M.Epid

Faculty of Medicine UI

Prevalence of dementia in Indonesia increased concordance with the increased number of elderly populations. People with dementia not only suffer from their cognitive decline but eventually the loss of functional ability will be more debilitating. The clinical features of behavioral and psychological symptoms of dementia are the most devastating problems endured by the carers (caregiver and family). Injuries, psychosocial distress, and loss of productivity are among some of the serious consequences that would be put on to the carer's shoulder and family. Cumulative chronic diseases as the risk factors of dementia as well as the co-morbidity will in turn add to the complexity of the problem faced not only by the patients but also the family. Knowing the burden of disease and the progression of the disease, early detection and prompt follow up in a comprehensive manner will be the most effective way to tackle this growing issue. Indonesia with its huge number of elderly people distributed in its 13,000 islands of archipelago would face a challenging effort.

“Depressive Symptoms Among Caregivers for Older Person: Implications for Long-Term Care in Asia”

Date : 7 April 2021

Time : 11.10 – 11.25

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Dr. Vasoontara Yiengprugsawan

Senior Research Fellow, CEPAR ARC Center of Excellence in Population Aging Research

An ageing population has resulted in increased demands for health and long-term care services. The rise in chronic non-communicable diseases and functional limitations amongst older persons requires comprehensive and continuation of care. Many emerging economies in Asia face challenges with limited formal welfare system and this puts pressure on informal care provided by families that are often decreasing in size. This study uses the Indonesian Family Life Survey (IFLS Wave 5) to investigate relationships and care requirements for older care recipients and their primary caregivers in the household and to identify factors relating to depressive symptoms (Center for Epidemiologic Studies Depression Scale, CES-D score) among caregivers of older persons. Over half of care recipients aged 50 years and older with functional limitations reported requiring intermediate or high-level care intensity. Older males most commonly reported receiving care from their spouse while older females, who were more likely to be widowed, reported receiving care from adult children. A key protective factor for depressive symptoms was household co-resident support. To meet the demand of future needs for elderly care, provision of adequate support including for mental health could mitigate adverse effects for caregivers. Findings will be discussed in the broader context of long-term care policy and planning and relate to implications for emerging economies in Asia.

SYMPOSIUM 2

LONELINESS

“Loneliness in Elderly during Pandemic of COVID-19. Why it Matters and What Should We Do”

Date : 7 April 2021

Time : 10.40 – 10.55

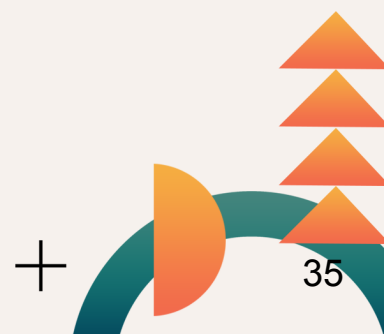
Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Dr. dr. Meily Kurniawidjaja, M.Sc., SpOK

Professor, Faculty of Public Health UI

Loneliness can affect mental health, and it can be worse, particularly in elderly. Elderly people are a vulnerable group to get the reduction of quality of life as a result of aging, chronic illness, or left by their spouse. In addition, the elderly tend to perceive loneliness more intensely compared to the young generation which can cause feelings of emptiness, neglect, powerlessness, and meaningless life. In fact, loneliness is one of the most contributing factors causing depression on elderly and influencing physiological performance both directly and indirectly, as well as affecting health and wellbeing, especially in the situation of the COVID-19 pandemic. Therefore, health protocols are recommended in order to prevent transmission since the new normal era has created a cultural shock. For instance, no more family visits, hugs or parties because conflict with physical distancing, suggestions to avoid crowds and reducing mobilization.

Our preliminary survey on 457 family members of elderly revealed that approximately 50% of elderly do not have a peer group, and it is hard to find a friend or people to communicate when they need to as impact of the pandemic. It is crucial to take prevention and guidelines for new normal so the elderly will not feel lonely. A preventive measure toward loneliness among elderly will be discussed in this study whether formal elder-care-services are needed.



“Increasing Loneliness in Indonesian Elderly: A Psychosocial Impact of Pandemic COVID-19?”

Date : 7 April 2021

Time : 10.55 - 11.10

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

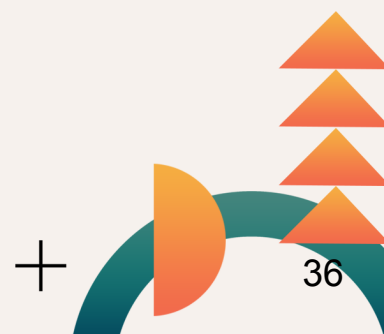
Speaker : Dr. dr. Martina Wiwie Nasrun, Sp.KJ(K)

Faculty of Medicine UI

Loneliness in the Elderly is a common problem due to lack of social relationship and lack of emotional connection to environmental engagement. Both internal and external factors play a role in this subjective feeling of loneliness. Elderly who are living alone or living with family (spouse, children) or stay in institution care may feel lonely even though there are a lot of activities and people available around them.

Our study of loneliness in Indonesian Elderly (over 60 years) that was carried out by online survey in August – October 2020 showed the prevalence rate as much as 68.44 % out of 358 responders of all Indonesia regions. This finding is more than twice higher than older adult loneliness in the Irish study (Tilda et al, 2020) which is only 29 %. This phenomenon should be explored further why and what factors may contribute to loneliness of Indonesian Elderly, does it relate to pandemic Covid19?

Loneliness should be well managed as early as possible because this chronic condition may lead to depression disorder and other psychopathology including physical health. We develop a module of loneliness intervention (MOLD-module to get out of Loneliness and Depression) that is expected to be a model to stop loneliness and thus prevent depression during and after pandemic covid19. The effectiveness of the module has been studied in 12 weeks RCT (final remains analysis on going).



“Effectiveness of Mental Health and Psychosocial Support (MHPSS) on Reduction Loneliness and Enchancing Psychosocial Developmental Task of Elderly During Pandemic COVID-19”

Date : 7 April 2021

Time : 11.10- 11.25

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Dr. Budi Anna Keliat, S.Kp., M.AppSc

Faculty of Nursing UI

The COVID-19 pandemic has impacted mental health in the elderly throughout the world as a vulnerable group. The elderly who had COVID-19-related symptoms are more likely lonelier. Loneliness as a threat to the quality of life of older people. During the pandemic, digital technologies approach to delivering intervention enable the elderly to live independently at home for a longer period. To identify the level of loneliness and also to examine the effectiveness of mental health and psychosocial support (MHPSS) through an online approach

This was a quasi-experimental pre-post-test with a control group design. It was conducted among 106 older participants, 54 elderly in the experimental group and 52 in the control group. Loneliness assessed using the 11-item De Jong Gierveld Scale, and Ego Integrity Scale assessed according to psychosocial developmental task devised by Erikson (1986). MHPSS delivered by WhatsApp group, google form, and online meeting platform. Inferential statistics showed a significant difference in the reduction level of loneliness in the intervention group compared with the baseline ($p < 0,005$) but no such improvement for the control group. The Elderly has moved towards understanding life more meaningful and clear (p -value $< 0,005$) after completing the mental health and psychosocial support. Although the elderly experience many age-related problems which may reduce their interest in an online program, they must be gadget-proficient, because online engagement intervention can reduce the level of loneliness of the elderly and in this way has a positive effect on their psychosocial development task. In general, it could be stated that online approach intervention has an important place among methods used in dealing with the loneliness of the elderly.

SYMPOSIUM 3 FALL

“I-FRAT (Indonesian Fall-Risk Assessment Tools) to Predict Fall Risk for Indonesian Older Adults”

Date : 7 April 2021

Time : 10.40 – 10.55

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

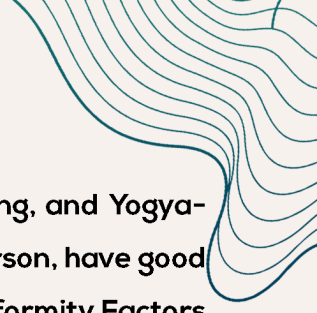
Speaker : Indri Hapsari Susilowati, S.K.M., M.K.K.K., Ph.D

Faculty of Public Health UI

Based on data from BPS in 2020, the percentage of Indonesian elderly population is estimated to increase in the following year. The classification of old age is starting from 60 years and above. Recently, the elderly population is about 10% but it will reach around 20% in 2045, which means Indonesia will become a super aging society. The elderly people as an extraordinary group due to decreased function both physically and psychological. Then, elderly have a high risk of getting a fall. The WHO data from 2018 showed that 80% of fall related fatalities occur in low and middle income countries and the prevalence of fall is about 32 – 42%.

Fall related to Quality of Life. Because of fall, it could change older people from independent people into dependency even total or semi care and could be disability. Because of that their quality of life will decrease. There were some fall risk assessment tools which used to predict the possibility of fall among elderly. However, there were no fall risk assessment tools for Indonesian elderly yet. Therefore, it is important to develop fall risk assessment tools.

Based on my research, I developed IFRAT (Indonesian Fall Risk Assessment Tools). It consists of 6 factors, such as balance, history of fall, health factor (physical and psychic), habit of defecating and urinating, medicine consumption, and cognitive factors. IFRAT has been developed by study since 2018. It was adopted by STEADI (Stopping Elderly Accident, Death, and Injuries) from CDC and JHFRA (John Hopkins Fall Risk Assessment Tools). Those instruments had widely used to predict the fall risk among elderly.



The respondents of this study are 427 persons, collecting from Jakarta, Bandung, and Yogyakarta city. The inclusion of respondents is the age over 60 years old, independent person, have good communication (no hearing loss), and had no mental diseases. The analysis using Conformity Factors Analysis with method direct oblimin, and to see the sensitivity and specificity by ROC (Receiver Operating Characteristic) to find the AUC (Area Under Curve)

The factors in IFRAT are determined by factor analysis, to identify some factors that have common dimension into some group, this factor based on the results of STEADI and JHFRAT tools. Then it will find the difference between the dimension group by Confirmatory Factor Analysis (CFA). They are quite different from each dimension group which enter into IFRAT factors. The result of sensitivity and specificity Test found the AUC score is 0,74 which this score is right on the requirements (0,7) that state the ability of the test is good in explaining the possibility of a fall but it is not strong enough.

Keywords: Fall, Indonesia, Risk, Elderly, Tools



“Falls in Malaysia”

Date : 7 April 2021

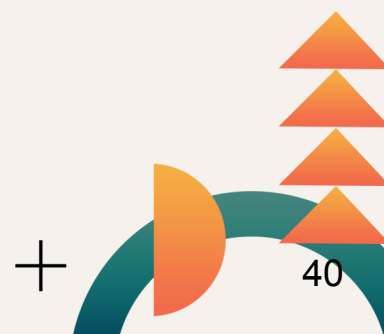
Time : 10.55 - 11.10

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Dr. Tan Maw Pin

Professor, University of Malaya, Malaysia

One in four adults aged 65 years living in the Klang Valley, Malaysia, fall at least one in the past 12 months according to the Malaysian Elders Longitudinal Research (MELoR), which a nationwide survey published by the Institute Public Health suggests that one in six older Malaysians have had at least one fall in the past year. The Malaysian Falls Assessment and Intervention Trial (MyFAIT) suggested that falls risk increasing drugs represent the most commonly identified risk factor among adults aged 65 years and over with two or more falls or one injurious fall in the past 12 months recruited into the randomized controlled trial. The trial, however, found that a multifactorial intervention involving a modified Otago exercise, home hazards intervention, falls education, visual intervention, medication review and cardiovascular evaluation did not significantly reduce the primary outcome of fall occurrence over 12 months' follow-up. A subsequent study, called Life After Falls (LiAF) is now evaluating post-falls behaviour and psychological and environmental influences on post-fall physical activity.



“Fall Prevention and Management Interventions: Selected Examples for ASEAN Countries”

Date : 7 April 2021

Time : 11.10 - 11.25

Room Link : <https://zoom.us/j/97889914528?pwd=emVsN2RzVGVLZzZBQnZQb1YvOWRWUT09>

Speaker : Prof. Dr. Supa Pengpid, M.Sc., MBA., DrPH
Professor, Mahidol University, Thailand

Falls are an increasing problem among older people. Over 20% of elders in US reported having fallen during the past year. Older age was associated with greater fall risk, as was having diabetes (Geng et al 2017). In Asia, Gupta et al (2015) reported 5% experiences fall which account for 30% of overall injuries and indicates barriers to access to care and the need to improve trauma care systems in Nepal. In the scoping review of Tzeng et al (2020) among 17 articles related to barrier for fall prevention concludes that older adults lacking inner drive and self-denial of being at risk for falls (barriers) and correcting inaccurate perceptions of falls and fall-prevention strategies (facilitators).

Several fall interventions developed and tested across the globe, mostly in developed countries with different effectiveness of results of those interventions, but little information funded in ASEAN countries. Below information summaries from scoping review based in order to recognized various forms of falls prevention and may applied in research and development; and implementation in ASEAN countries;

1. Fall risk screening strategy in the primary care setting (Meekes et al, 2020)

2. Community-based exercise programs designed to reduce fall risk are increasingly available to older adults in the Unites States.

3. Physical exercise program

- Hamed et a (2018) review and meta-analysis provide evidence found that physical exercise interventions have the potential to reduce fall rate and risk in healthy older adults. Interventions that applied posture-challenging exercises showed the highest effects.
- Exercise programmes reduce the rate of falls and the number of people experiencing falls in older people living in the community (high certainty evidence). The effects of such exercise programmes are uncertain for other non-falls outcomes.

- Exercise programmes that reduce falls primarily involve balance and functional exercises, while programmes that probably reduce falls include multiple exercise categories (typically balance and functional exercises plus resistance exercises). Tai Chi may also prevent falls, but we are uncertain of the effect of resistance exercise (without balance and functional exercises), dance, or walking on the rate of falls.

4. Home modification

Systematic review of the effect of home modification and fall prevention programs on falls and the performance of community-dwelling older adults (Chase et al 2012) among articles were analyzed and synthesized. The strongest results were found for multifactorial programs that included home evaluations and home modifications, physical activity or exercise, education, vision and medication checks, or assistive technology to prevent falls. Positive outcomes included a reduce rate of functional deteriorate, a decrease in fear of falling, and an increase in physical balance and strength. The strength of the evidence for physical activity and home modification programs provided individually was moderate.

5. Environmental assessment and modification

A review of the effectiveness of environmental assessment and modification in the prevention of falls amongst community dwelling older people (Pighills et al 2015) found it was effective in falls prevention; intervention was effective with high risk participants; and that high intensity environmental assessment was effective. Environmental interventions which were delivered by occupational therapists were deemed high intensity

6. Interventions for preventing falls in older people in care facilities and hospitals

Cameron et al (2020) in reviews of interventions for preventing falls in older people in care facilities and hospitals. The review concludes that:

- (1) In care facilities: uncertain of the effect of exercise on rate of falls and it may make little or no difference to the risk of falling. General medication review may make little or no difference to the rate of falls or risk of falling.
- (2) In hospitals: uncertain of the effect of additional physiotherapy on the rate of falls or whether it reduces the risk of falling, also uncertain of the effect of providing bed sensor alarms on the rate of falls or risk of falling.

- Exercise programmes that reduce falls primarily involve balance and functional exercises, while programmes that probably reduce falls include multiple exercise categories (typically balance and functional exercises plus resistance exercises). Tai Chi may also prevent falls, but we are uncertain of the effect of resistance exercise (without balance and functional exercises), dance, or walking on the rate of falls.

4. Home modification

Systematic review of the effect of home modification and fall prevention programs on falls and the performance of community-dwelling older adults (Chase et al 2012) among articles were analyzed and synthesized. The strongest results were found for multifactorial programs that included home evaluations and home modifications, physical activity or exercise, education, vision and medication checks, or assistive technology to prevent falls. Positive outcomes included a reduce rate of functional deteriorate, a decrease in fear of falling, and an increase in physical balance and strength. The strength of the evidence for physical activity and home modification programs provided individually was moderate.

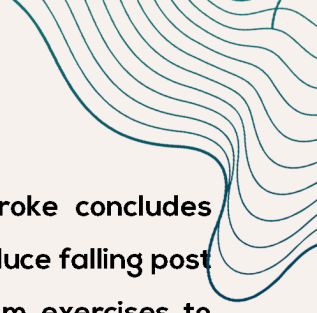
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- (2) In hospitals: uncertain of the effect of additional physiotherapy on the rate of falls or whether it reduces the risk of falling, also uncertain of the effect of providing bed sensor alarms on the rate of falls or risk of falling.



Denissen et al (2019) review interventions for preventing falls in people after stroke concludes that there exists very little evidence about interventions other than exercises to reduce falling post stroke. Low to very low-quality evidence exists that this population benefits from exercises to prevent falls, but not to reduce number of fallers.

7. Home assessment, Physical and Environmental Intervention

Home assessment and environmental modification play an important role in reducing the risk of falls and helping older adults and persons with disabilities to remain living in their communities:

- Flooring in long term care (Mackey et al 2019) not effective at preventing serious fall-related injuries in LTC
- Light the Way: providing effective home modifications for clients with low vision, lighting, contrast color, contrast texture; place for everything, and everything in its place
- Environmental Assessment and Modification as Fall-Prevention Strategies for Older Adults (Pynoos et al, 2010). The benefits of hazard reduction through home modification are most pronounced when home and community environments are considered in conjunction with the specific health and functioning of older adults. Fall-prevention strategies and interventions that consider interactions between the environment, health status, and behavioral patterns of older adults can be custom-fit to meet the specific needs of older individuals and other people with disabilities. Practitioners, such as occupational therapists, who are knowledgeable about the places where older persons live and carry out activities, are especially well situated to assist in reducing fall risk through assessments, analyses, and provision of recommendations regarding home environments

8. Fall Prevention and Management Policy

This example concluded from the documents analysis of spinal cord injury in Canada (Singh et al, 2020) thus; Fall prevention/management policies and procedures in SCI rehabilitation were organized into three main categories: 1) pre-fall policies and procedures; 2) post-fall policies and procedures; and, 3) communication between and amongst staff, patients, and families. Pre-fall policies and procedures encompassed: a) the definition of a fall; b) fall risk assessments in SCI rehabilitation; and, c) fall prevention strategies. The post-fall policies and procedures included: a) recovery from a fall; b) incident reporting process; and, c) fall classification. Components of fall prevention/management policies and practices that differed between hospitals included the fall risk assessments, post-fall huddles, and fall classifications.

ORAL PRESENTATION

*Note: Time uses Western Indonesia Time or GMT +7

Code	OP-A		OP-B	
Topic	Nutrition and Aging & Metabolic Syndrome		Economic and Aging Society & Technology and Health Care for Aging	
Chair	Prof. Dr. dr. Sudijanto Kamso, SKM		dr. Hasbullah Thabrany, MPH, Dr.PH	
Co-Chair	Prof. Dr. drg. Indang Trihandini, M.Kes		Dr. Besral, SKM, MSc	
Room	ROOM-A		ROOM-B	
09.20 - 09.25	Chair	Opening	Chair	Opening
09.25 - 09.35	Yuko O. Hirano	Associations Between Sociodemographic Characteristics of Caregivers and Oral Care Strategies in Nursing Homes in Indonesia	Aiko Kikkawa Takenaka	The Pattern of Labor Force Participation and Retirement of Older Persons: Review of Evidence from Advanced Economies and the Implications to Developing Asia
09.35 - 09.45	Khoirunurrofik Khoirunurrofik	Sugar Sweetened Beverages Excise Tax in Indonesia: The Impact on Consumption and its Potential Revenue	Desy Nuri Fajarningtiyas	Empowering the Elderly: Implementation of Economic Function
09.45 - 09.55	Özlem Deligöz	Can the Route of Nutrition started in Geriatric Palliative Care Patients with Malnutrition Predict Mortality?	Dr Sally WS LO	Health literacy and caregiving burden among family caregivers of older adults in Hong Kong
09.55 - 10.05	Suey Yeung	Certain dietary patterns are associated with GLIM criteria among Chinese community-dwelling older adults: A cross-sectional analysis	Mahiro Fujisaki-Sueda-Sakai	Intentions for using ICT/IoT services and related factors among community-dwelling older people in Japan
10.05 - 10.15	Ratih Wirapuspita Wisnuwardani	Dietary Polyphenol Intake and cardiometabolic health in European adolescents	Mardiana Dwi Puspitasari	The role of Internet-based media use in delaying the cognitive decline of the elderly in Indonesia
10.15 - 10.25	Azrimaidaliza	A META ANALYSIS STUDY OF RISK FACTORS FOR DIABETES MELLITUS IN INDONESIA		
10.25 - 10.35	Tungki Pratama Umar	Total Cholesterol and Blood Pressure Correlation in Hypertensive Patients at Kalidoni Primary Health Center		
10.35 - 10.45				
10.45 - 10.50	Chair	Closing	Chair	Closing

ORAL PRESENTATION



*Note: Time uses Western Indonesia Time or GMT +7

Code	OP-C		OP-D	
Topic	Dementia and Alzheimer		Population Aging in the COVID-19 Era	
Chair	Prof. Ka Lin, Ph.D		Prof. Dr. dr. Sudarto Ronoatmodjo, SKM, M.Sc	
Co-Chair	Rico Kurniawan, SKM, MKM		R. Sutiawan, S.Kom, M.Si	
Room	ROOM-C		ROOM-D	
09.20 - 09.25	Chair	Opening	Chair	Opening
09.25 - 09.35	Muhammad Faruqi	Underweight Nutritional Status as a Predictor of Mortality Prognosis in Alzheimer	Asyifa Robiatul Adawiyah	The Mental Health Impact of Pandemic Covid-19 in elderly (A study on factor associated to Sleep Deprivation, losing appetite and Psychosomatic symptom)
09.35 - 09.45	RAJWINDER KAUR HARDEV SINGH	PHYSICAL PERFORMANCE AND ACTIVITY DIFFERENCES BASED ON GENDER IN COMMUNITY-DWELLING OLDER ADULTS WITH AND WITHOUT MILD COGNITIVE IMPAIRMENT	Dr. Lilis Heri Mis Cich	The Impact of COVID 19 Pandemic on Older People Living Conditions in Indonesia
09.45 - 09.55	Tsukumi Tondokoro	Gender differences in dementia knowledge? -The correlation between dementia knowledge and sociodemographic factors by gender in middle-aged population in Indonesia-	Ariantin Ulfah SC	COVID-19 Elderly Patients Profile in Labuang Baji Hospital Makassar, South Celebes
09.55 - 10.05	Chintya Putri Erlianti	Chronic Diseases and Cognitive Impairment Among Older Adults: Results of The Fifth Wave of Indonesia Family Life Survey (IFLS5)	Bonardo Prayogo Hasiholan	The Burden of Caring for Elderly Family Members on Health Workers in COVID-19 Pandemic Era
10.05 - 10.15	Brendan Stuart Weekes	Dementia in China: Clinical and Epidemiological Studies	Eka Afrina, M.Kesos	Welfare Conditions and Resilience of the Elderly During Covid-19 Pandemic
10.15 - 10.25	Muhammad Dzaki Fahd Haekal	Does Community Participation Increase the Role of Education in Preventing Dementia Among the Elderly?	MOHAMMAD ANISUR RAHAMAN	Challenges of Aging Health Care in Bangladesh during COVID-19 Pandemic
10.25 - 10.35				
10.35 - 10.45				
10.45 - 10.50	Chair	Closing	Chair	Closing

ORAL PRESENTATION



*Note: Time uses Western Indonesia Time or GMT +7

Code	OP-E		OP-F	
Topic	Psychosocial Issues in Aging		Other Issues 1	
Chair	Prof. Dr. dr. L. Meily Kurniawidjaja., M.Sc., SpOk		Prof. Dr. dr. Ratna Djuwita, MPH	
Co-Chair	Stevan Deby Sunarno, SKM, MKKK		Indri Hapsari Susilowati, SKM, MKKK, PhD	
Room	ROOM-E		ROOM-F	
09.20 - 09.25	Chair	Opening	Chair	Opening
09.25 - 09.35	Bingqi Ye	The Bidirectional Association between Physical Multimorbidity and Subclinical Depression in Chinese Older Adults	Mukhlidah Hanun Siregar	Association between age and abdominal obesity in women of reproductive age: difference between urban and rural area in Indonesia
09.35 - 09.45	Velittin selcuk Engin	DIFFERENT FEATURES OF OUTPATIENTS AND HOMEBOUND PATIENTS EVALUATED IN PRIMARY CARE	TJ Robinson T. Moncatar	Understanding the gaps and opportunities in addressing the needs of older Filipinos: a qualitative exploration of health and social workers' experiences in urban care settings
09.45 - 09.55	Zheng Fang	Intergenerational Support and Life Satisfaction of Older Parents in China	Dinni Agustin	Developing Long Term Care (LTC) Training Program for Indonesian Elderly Caregiver
09.55 - 10.05	Veronica Shimin Goh	Association of relationship quality in caregiver-care recipient dyads with positive and negative aspects of caregiving among family caregivers of older Singaporeans	Susiana Nugraha	Fear of falling in community-dwelling older adults and the associated risk factors
10.05 - 10.15	Cheryl Ng	THE ASSOCIATION BETWEEN FEAR-AVOIDANCE BEHAVIOUR (FAB) AND DEPRESSION IN GERIATRIC PATIENTS WITH LOW BACK PAIN (LBP)	Dr. Charles Ramendran	INVESTIGATION ON PSYCHOLOGICAL IMPACT OF COVID-19 TOWARDS HEALTHCARE WORKERS IN GENERAL HOSPITAL
10.15 - 10.25	Nalan Engin	Falls risk in older adults: A cross sectional study	INDASAH	WORK ENVIRONMENT AND MANAGEMENT SYSTEM AND ITS IMPACT ON EMPLOYEE SATISFACTION Dr. Dr. ISKAK HOSPITAL TULUNGAGUNG
10.25 - 10.35	Shelley De La Vega	Mental Health among Filipino Older Persons	Resti Pujihavuty	Family Functions of Elderly Families in Indonesia: Rural-Urban Differences
10.35 - 10.45				
10.45 - 10.50	Chair	Closing	Chair	Closing

ORAL PRESENTATION

*Note: Time uses Western Indonesia Time or GMT +7

Code	OP-G	
Topic	Other Issues 2	
Chair	Prof. Haryoto Kusnoputranto, M.D., Dr.PH	
Co-Chair	Helen Andriani, S.Si, Apt, M.Sc, Ph.D	
Room	ROOM-G	
09.20 - 09.25	Chair	Opening
09.25 - 09.35	SUMITHRA SUPPIAH	PHARMACEUTICAL PICTOGRAM VALIDATION AMONG OLDER PERSONS WITH LIMITED ENGLISH PROFICIENCY
09.35 - 09.45	Ameer Ali	Covid 19 and lockdowns - use of the language of folk wisdom for survival - focus on elderly Sindhis in Sind, Pakistan
09.45 - 09.55	Mary Ann J. Ladia	Frailty among older persons: Cases of robust, pre frail and frail Filipinos
09.55 - 10.05	Margareth Maya Parulianta Naibaho	Preparation for Pre-Elderly in Entering Old Age
10.05 - 10.15	Irma Ruslina Defi	REHABILITATION FOR FUNCTIONAL DISTURBANCES ON GERIATRIC PATIENT WITH RIGHT HEMISPHERE STROKE AND ACUTE CONFUSIONAL STATE
10.15 - 10.25	Katja Hanewald	Intrinsic Capacity: Validation of a New WHO Concept for Healthy Ageing
10.25 - 10.35	Chak Kwan Chan	The Caring Burden and Needs of Older Carers in China
10.35 - 10.45	Ka Lin	Four Ideals of aging policies and their relationships explored through the Bibliometrics analysis
10.45 - 10.50	Chair	Closing

POSTER PRESENTATION

Link	No	Code	Author
https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	1	PP-8	Dr. Feri Ahmadi, MPH
	2	PP-1	Muhammad Dawam
	3	PP-21	Laila Ulfa
	4	PP-2	Edwin Nugroho Njoto
	5	PP-3	HO Yoke Meng
	6	PP-4	Setia Megawati Hutajulu

No	Topic	Title
1	Nutrition and Aging A	Food Availability Family a Driver Online Motor in the Pandemic COVID-19 in DKI Jakarta
2	Nutrition and Aging A	Aging Management Model at Dayakan Village – Kulonprogo District, Yogyakarta Special Province
3	Nutrition and Aging A	Functional Mobility among Underweight and Overweight Elderly
4	Other Issues 1 B	Low Subcutaneous Fat as A Risk Factor for Sarcopenia among Elderly Women in Bali, Indonesia: A Community-Based Age-Matched Case-Control Study
5	Other Issues 1 B	3Ps (Perception, Personal Attributes and Practices) of Fitness Trainers in Engaging Older Adults to Exercise
6	Other Issues 1 B	Case Study of Solid Medical Waste Management at Hospital X Medan City during the COVID-19 Pandemic


*A, B: Folder/Gallery on the APRU Website

POSTER PRESENTATION

Link	No	Code	Author
https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	7	PP-19	Mugia Bayu Rahardja
	8	PP-22	Hannah Pellejo
	9	PP-23	Ririn Arminsih Wulandari
	10	PP-24	Chairunnisa Murniati
	11	PP-34	Reni Pebrianti
	12	PP-35	Yuanyuan Deng

No	Topic	Title
1	Other Issues 1 B	The cognitive function of the elderly in the neighborhood of high poverty: the role of social participation and education
2	Other Issues 1 B	Physical Activity, Fall Risk and Depression among Filipino Older Persons
3	Other Issues 1 B	Risk of Mercury (Hg) Exposure from Fish Consumption by Muara Angke Fishermen Community at Jakarta Bay in 2018
4	Other Issues 1 B	Elderly and Health Insurance (The Family Protection Function to the Elderly)
5	Other Issues 2 C	The Ageing Population in Indonesia: Challenges and Opportunities
6	Other Issues 2 C	Recovery from Mobility Limitations among Older Americans

*B, C: Folder/Gallery on the APRU Website



Venue	No	Code	Author
https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	13	PP-36	Wulan Sari Rasna Giri Sembiring
	14	PP-37	Dian Kristiani Irawaty
	15	PP-38	Ririn Arminsih Wulandari
	16	PP-41	Nurleli
	17	PP-43	Naneu Retna Arfani
	18	PP-5	Darojad Nurjono Agung Nugroho

No	Topic	Title
13	Other Issues 2 C	Conditions Underlying The Presence Of Health Problems Of The Elderly Population In Tanah Bumbu District
14	Other Issues 2 C	A Silent Impendence of Falls for Older People in Developing Countries: An Integrative review
15	Other Issues 2 C	Hygiene Sanitation and The Presence Of Salmonella Typhi at Food Handlers in The Elementary Schools in Tangerang City Year 2017
16	Other Issues 2 C	Description of Clean and Healthy Living Behavior During the COVID-19 Pandemic in Antang Village, Makassar City
17	Other Issues 2 C	Determinant Factors on Vaccine COVID-19 Hesitancy in Indonesia
18	Economic and Aging Society D	Benefits of Dividend Demographic Opportunities for the Elderly in Indonesia

*C,D: Folder/Gallery on the APRU Website



Venue	No	Code	Author
https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	19	PP-29	Mohammad Ammar Alwandi
	20	PP-31	Nur Diyana Binte Azman
	21	PP-42	Yudi Rafani
	22	PP-7	Novie Widjaja
	23	PP-10	Ahmad Fasni
	24	PP-12	Tri Niswati Utami

No	Topic	Title
19	Economic and Aging Society D	Second Demographic Devidend : The Opportunity for The Provinces of Java Island
20	Economic and Aging Society D	Informal Caregiving Time and Its Cost in Context of Older Singaporeans Receiving Human Assistance with Their Daily Activities
21	Economic and Aging Society D	Anticipating the Consequences of Ageing Population in Bangka Belitung Islands: An Analysis of Prevailing Explanations
22	Technology and Health Care for Aging E	A Preliminary Study An Alternative Design Procedures for Early Detection of Thyroid Abnormalities Using Ultrasonography
23	Technology and Health Care for Aging E	Conquering Elder Care in a Rural West Sumatera Township of Desa Kampung Baru Padusunan: A Synergistic Alliance
24	Technology and Health Care for Aging E	Ergonomic Design of Ablution Places' Increasing the Comfort of the Elderly (Case Study of Mosques in Indonesia)


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https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	25	PP-16	Martini Heniastaty Patuwondatu
	26	PP-9	Anung Ahadi Pradana
	27	PP-27	Aulia Salmaddiina
	28	PP-39	Yuliana
	29	PP-11	Fierdania Yusvita
	30	PP-15	Ridha Restila

No	Topic	Title
25	Technology and Health Care for Aging E	The Effect of Back Massage Therapy on Decreasing Pain Intensity in the Elderly with Rheumatic / Osteoarthritis at the Elderly Posyandu in Patam Lestari Village, the Work Area of the Sekupang Health Center in Batam City 2019
26	Dementia and Alzheimer F	Caregiving Elderly with Dementia: Positive Responses Experienced by Spouses
27	Dementia and Alzheimer F	Digital Tools for Diagnosis and Treatment Alzheimer's Disease on Aging Population : A Systematic Review
28	Dementia and Alzheimer F	Micronutrient Role in Preveting Alzheimer's Disease Progression
29	Metabolic Syndrome G	Description of Quality of Life in Pre-Elderly Workers (45-56 Years Old) with Metabolic Syndrome in PT. X
30	Metabolic Syndrome G	Risk Factors for Non-Communicable Diseases in Productive Age in Kampar District, Riau Province

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	32	PP-17	Sari Kistiana, S.IP., M.APS
	33	PP-18	Maria Gayatri
	34	PP-26	Yolanda Handayani
	35	PP-28	Shelley Ann F. de la Vega
	36	PP-14	Delfriana Ayu A.

No	Topic	Title
31	Population Aging in the COVID-19 Era H	Knowledge, Attitude and Practices of Caregivers towards Covid-19 and its role in Caring of Elderly during Outbreaks: A Quick Online Survey in 4 Cities in Indonesia
32	Population Aging in the COVID-19 Era H	The Impact of COVID-19-Social Isolation on Mental Health and Wellbeing of Older Adults as Vulnerable Population: A Narrative Review
33	Population Aging in the COVID-19 Era H	Wellbeing in Elderly People in Times of COVID-19 Outbreak: A Narrative Review
34	Population Aging in the COVID-19 Era H	The Level of Stress of the Elderly on the Implementation of Health Protocols in the Large-Scale Social Restriction Period (PSBB)
35	Population Aging in the COVID-19 Era H	COVID-19 in the Decade of Healthy Aging: A Call for a National Health Program for Older Filipinos inclusive of Pandemic Preparedness and Response
36	Population Aging in the COVID-19 Era I	Menopausal Symptoms in Menopause Women

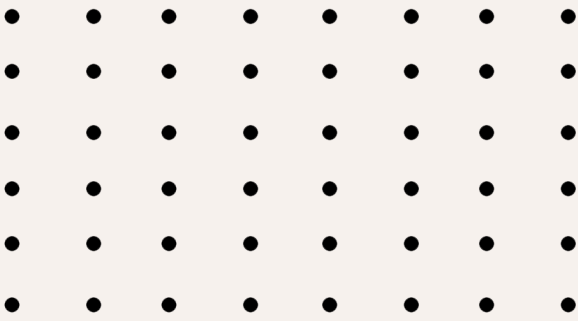
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https://scifes.fkm.ui.ac.id/apruaging2021/ocs/presentation/	37	PP-25	Reggy Capacio Figer
	38	PP-32	Ayesha Mumtaz

No	Topic	Title
37	Psychosocial Issues in Aging J	Surviving the 3/11 Disaster: Reflections of the Great East Japan Earthquake Among Older Adults in Iwate Japan
38	Psychpspcial Issues in Aging J	Covid-19 and Mental health of Aging Population: An Application of the Resiliency Theory

***J: Folder/Gallery on the APRU Website**



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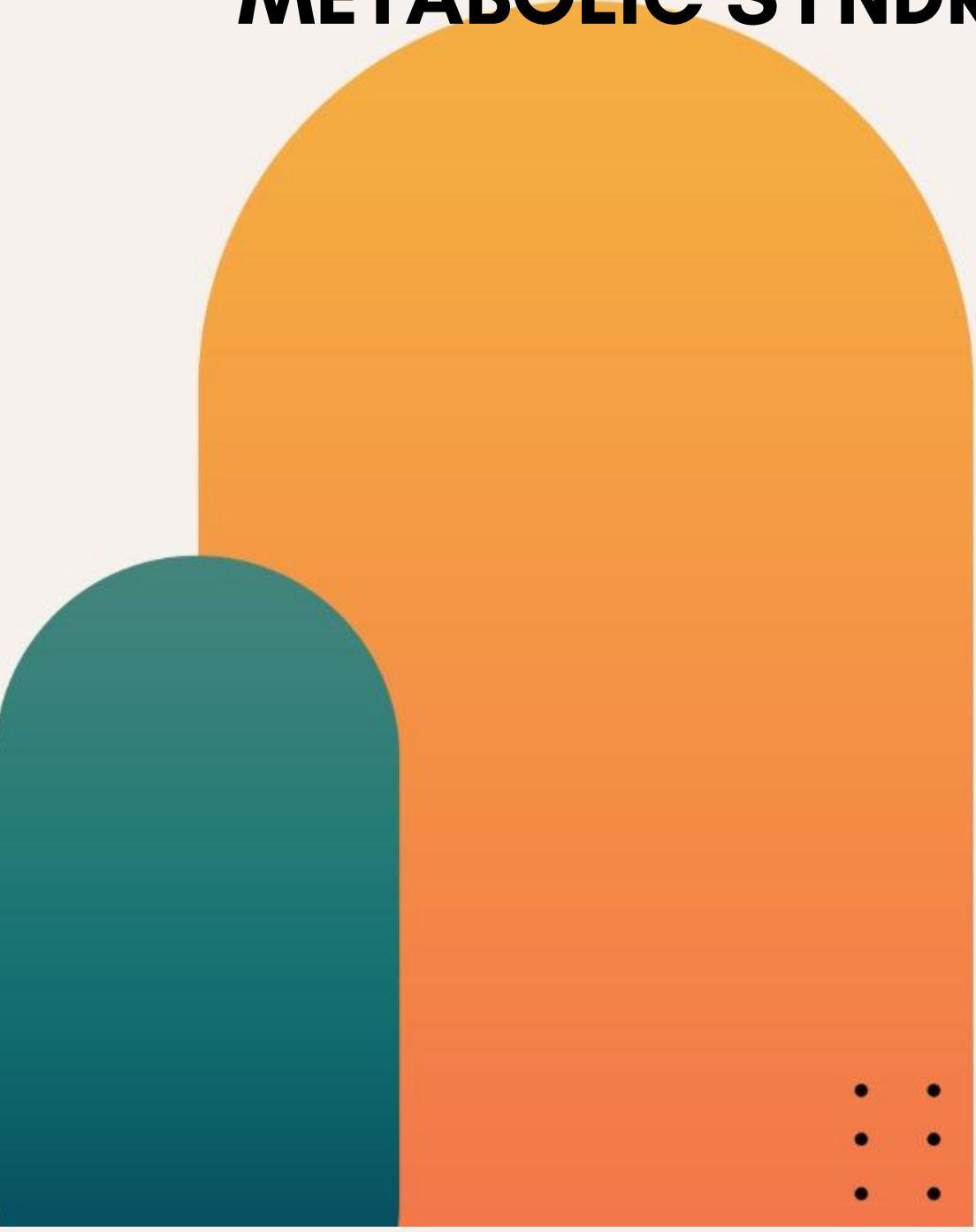
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OP - A

NUTRITION AND AGING
&
METABOLIC SYNDROME



Associations Between Sociodemographic Characteristics of Caregivers and Oral Care Strategies in Nursing Homes in Indonesia

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Abstract

Purpose

This study aimed to examine the associations between the sociodemographic characteristics of caregivers and the use of different types of oral care strategies in nursing homes in Indonesia.

Background

Declining physical abilities in the elderly reduce their ability to perform self-care activities, which affects the cleanliness and health of their teeth and mouth (Boedhi-Darmojo et al., 2007). Oral health is a major factor in symptom management in the elderly, as the oral cavity is a common site for health problems, such as dry mouth, mouth sores, and fungal infections (Fillit, Rockwood, & Young, 2017). Caregivers play an important role in the maintenance of oral health in this population.

Methods

This was a cross-sectional study that included caregivers from selected public and private nursing homes in four provinces (West Java, Yogyakarta, Banten, and DKI Jakarta). Participants were randomly selected in a proportional manner. Multiple linear regression analyses were performed to identify sociodemographic characteristics (i.e., age, gender, type of nursing home [public or private], years of services in care work, and educational background and training experiences) of caregivers that affect the application of oral care strategies in their caregiving. Six domains of oral care were examined in the study (Higashijima & Watanabe, 2018).

Results

A total of 213 caregivers participated in this study. Their average age was 35.3 years (standard deviation [SD]=11.2, range=18–70). Sixty-three percent were women. Average number of years of care work was 7.7 years (SD=6.8, range=1–37). Fifty percent were engaged in care work in private nursing homes. Average years of education was 12.3 years (SD=2.5, range=6–15).

Multiple linear regression models indicated that environmental observation scores were significantly predicted by female ($\beta = -.238$; $p = .001$), government type of nursing home ($\beta = .172$; $p = .02$) and the length of care work services ($\beta = -.161$; $p = .047$). The meal preparation score was significantly predicted by gender meal preparation was associated by male ($\beta = .146$; $p = .037$), Feeding period was influenced by training experience ($\beta = .291$, $p < .0001$), and Swallowing period was influenced by age ($\beta = -.182$; $p = 0.42$) and training experience ($\beta = .211$; $p = .003$). No indicators were found to be significantly associated with overall condition before meals and after meals.

Conclusion:

Oral care strategies are applied regardless of the caregiver's academic background or experience. There are gender differences in the division of labor in care work in Indonesia.

Keyword: caregivers, oral care, elderly, nursing homes

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Sugar Sweetened Beverages Excise Tax in Indonesia: The Impact on Consumption and its Potential Revenue

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Abstract

Background :

Sugar sweetened beverages (SSBs) consumption is one of the leading risk factors for obesity and non-communicable diseases (NCDs). Taxes on SSBs have been used globally to reduce SSBs consumption. This study is to provide empirical evidence about the magnitude of price elasticity of SSBs demand in Indonesia and understand how such taxes will affect consumption. Tobit approach is employed using SUSENAS 2017 data to estimate the own-price elasticity of SSBs demand.

Result :

The results suggest that SSBs demand significantly prices elastic. Lower-income and rural households appear more price responsive than higher-income and urban households. This study also revealed the heterogeneity of own-price elasticity of SSBs demand for each category in Indonesia, ranging from -1.32 to -2.85. The impact of excise tax on SSBs consumption in Indonesia thus varies and evokes high burden to households if the excise tax rate for each category is not optimal. Applying the Ramsey inverse elasticity rule framework under the assumption of a full shifting of tax, imposing optimal excise tax rate of 20%, 25%, 32% and 43% for Carbonates and Energy drinks, Fruit drinks, Packaged tea and other RTDs, respectively, would significantly reduce SSBs consumption by 57%. It would also generate annual excise tax revenue of around Rp8.64 trillion, which can be used for promoting healthier diets, preventing obesity and NCDs, and reducing budget deficit.

Conclusion:

It advises policymakers in Indonesia that imposing an excise tax on SSBs would improve public health by significantly reducing SSBs consumption and generating substantial revenue.

Keywords: Sugar sweetened beverages, consumption, obesity, Tobit, own-price elasticity, excise tax, revenue.

A short biography of the presenting author

K. Khoirunurrofik is a Research Associate in Institute for Economic and Social Research (LPEM) and a Lecturer of Economics and Business Faculty, Universitas Indonesia. His research interest is public finance and fiscal decentralization, Public policy and public health, urban and regional economies, and small-medium enterprises development.

Introduction

Research Gaps

- In Indonesia, excise tax on SSBs has been discussed (2012) but has not been implemented due to disapproval from ASRIM and GAPMMI (Tempo, 2020).



- Indonesia lacks empirical evidence regarding the SSB taxes.
- In the absence of such evidence, own-PE of demand estimates is a useful tool to measure the potential impact of SSBs taxes on consumption.
- However, there is a large variability in the own-PE of demand estimates for SSBs around the world.



Research Objectives

- To provide empirical evidence about the magnitude of own-PE of SSB demand in Indonesia.
- To calculate the potential revenue generated based on the optimal excise tax rate.

Research Scope

- Utilizes household-level data from the 2017 SUSENAS.
- Focus on own-PE of SSB demand.
- Uses assumption of competitive market and full **shifting** of tax.

Can the Route of Nutrition Started in Geriatric Palliative Care Patients with Malnutrition Predict Mortality?

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Introduction/Aim: Nutritional functions are often impaired in palliative care patients. Malnutrition that develops as a result of this is a significant problem and affects life expectancy. This is even more important in elderly patients. The aim of this study was to evaluate the association between mortality and the route of nutritional support initiated in geriatric palliative care patients diagnosed with malnutrition.

Material/Methods: From an examination of the hospital records, the study included all the patients aged ≥ 65 years in the Palliative Care Unit of Haydarpaşa Numune Training and Research Hospital between January 2016 and December 2020 who were diagnosed with malnutrition (Nutritional Risk Screening (NRS) value ≥ 3) and for whom nutritional support was initiated. The patients were separated into 3 groups according to the first week of treatment given as oral, enteral, or parenteral nutritional support. Approval for the study was granted by the Local Ethics Committee.

Results: Evaluation was made of 1370 patients, comprising 572(42%) males and 798(58%) females. A total of 251(18%) patients were exitus (ex). Oral nutrition only was administered to 392(29%) patients with a mean age of 78 years, and 63(16%) were ex. Enteral nutrition only was administered to 743(54%) patients with a mean age of 81 years, and 117(16%) were ex. Parenteral nutrition only was administered to 235(17%) patients with a mean age of 80 years, and 71(30%) were ex.

Discussion/Conclusion: Enteral nutrition was started most often for elderly palliative care patients in our hospital, followed by oral then parenteral route. The mortality rate of patients who received oral and enteral route nutritional support was the same, and was seen to be significantly lower than that of patients for whom parenteral nutrition was initiated. Mortality can be predicted to be higher with the use of parenteral route nutritional support associated with the higher rate of complications seen.

Malnutrition and advanced age are significant factors with a negative effect on survival. Therefore, when planning nutritional support for elderly patients diagnosed with malnutrition

in palliative care, the oral route should be selected first, and if not sufficient, then the enteral route, and the final option should be the parenteral route.

Key Words: Palliative care, geriatric patients, malnutrition, nutrition route, mortality.

Table 1: Nutrition routes and mortality rate for geriatric palliative care patients diagnosed with malnutrition

	Patients	Exitus	Average Age	Male	Female
Oral Nutrition	392 (%29)	63 (%16)	78	191 (%49)	201 (%51)
Enteral Nutrition	743 (%54)	117 (%16)	81	281 (%38)	462 (%62)
Parenteral Nutrition	235 (%17)	71 (%30)	80	100 (%43)	135 (%57)
Total Patients	1370	251 (%18)	80	572 (%42)	798 (%58)

Certain dietary patterns are associated with GLIM criteria among Chinese community-dwelling older adults: A cross-sectional analysis

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Abstract

Purpose: This study examined the association between dietary patterns and malnutrition according to the Global Leadership Initiative on Malnutrition (GLIM) criteria among Chinese community-dwelling older adults aged ≥ 65 years in Hong Kong.

Background: Malnutrition is associated with adverse outcomes such as morbidity, sarcopenia, loss of independence, hospitalization, and mortality in older adults. Identifying the modifiable risk factors in the diet is essential for the prevention and management of malnutrition. A dietary pattern approach to examine the role of diet on malnutrition is preferred over individual food group or single nutrient approach, as focusing on isolated food group or nutrient cannot account for the synergistic and/or antagonistic interactions between nutrients. Recently, a consensus scheme for diagnosing malnutrition has been proposed by the Global Leadership Initiative on Malnutrition (GLIM).

Methods: A cross-sectional analysis of a prospective cohort study of community-dwelling older adults was conducted. Dietary patterns including Diet Quality Index International (DQI-I), Dietary Approaches to Stop Hypertension (DASH), the Mediterranean Diet Score (MDS), “vegetables-fruits” pattern, “snacks-drinks-milk products” pattern, and “meat-fish” pattern were estimated and generated from a validated food frequency questionnaire at baseline. Malnutrition was classified according to the modified Global Leadership Initiative on Malnutrition (GLIM) criteria (two phenotypic components: low body mass index and low muscle mass; one etiologic component: inflammation/disease burden). The association between the tertile or level of adherence of each dietary pattern and modified GLIM criteria was analyzed using adjusted binary logistic regression models.

Results: Among 3694 participants, 293 men (16.2%) and 104 women (5.5%) were classified as malnutrition according to the modified GLIM criteria. In men, a higher DQI-I score was associated with a lower risk of malnutrition (p-trend 0.005); whereas a higher “meat-fish”

dietary pattern score was associated with a higher risk of malnutrition (p-trend 0.022). None of the dietary patterns was associated with malnutrition in women.

Conclusion: Among Chinese community-dwelling older adults, a higher DQI-I score and a lower adherence to “meat-fish” dietary pattern were associated with a lower risk of malnutrition in men. Nutritional strategies for the prevention and management of malnutrition could potentially be targeted on dietary quality.

Key words: Aged; Chinese; GLIM criteria; dietary patterns; diet quality; malnutrition

Table 1. Association between dietary patterns and malnutrition according to the modified GLIM criteria in 3694 community-dwelling older adults

Dietary patterns	Men		Women	
	Model 1*	Model 2*	Model 1*	Model 2*
DQI-I score				
T1	Reference	Reference	Reference	Reference
T2	0.90 (0.67-1.22)	0.90 (0.63-1.29)	0.68 (0.42-1.10)	0.66 (0.37-1.18)
T3	0.60 (0.44-0.82)	0.59 (0.41-0.85)	0.75 (0.47-1.20)	0.72 (0.40-1.29)
P-trend	0.001	0.005	0.214	0.246
DASH score				
Low (≤ 4.0)	Reference	Reference	Reference	Reference
High (≥ 4.5)	0.79 (0.59-1.06)	0.74 (0.53-1.03)	0.67 (0.45-1.00)	0.63 (0.39-1.01)
P value	0.111	0.071	0.050	0.057
MDS score				
0-3	Reference	Reference	Reference	Reference
4-5	0.98 (0.74-1.29)	1.05 (0.76-1.45)	0.83 (0.54-1.29)	0.76 (0.45-1.31)
6-9	0.79 (0.55-1.15)	1.05 (0.67-1.63)	0.95 (0.55-1.65)	1.18 (0.61-2.30)
P-trend	0.271	0.801	0.713	0.851
Vegetables-fruits				
T1	Reference	Reference	Reference	Reference
T2	0.56 (0.41-0.77)	0.52 (0.36-0.74)	1.00 (0.61-1.65)	1.11 (0.61-2.04)
T3	0.70 (0.52-0.94)	0.72 (0.50-1.02)	1.27 (0.79-2.05)	1.40 (0.77-2.53)
P-trend	0.013	0.050	0.323	0.265
Snacks-drinks- milk-products				
T1	Reference	Reference	Reference	Reference
T2	1.02 (0.76-1.38)	0.92 (0.65-1.31)	1.06 (0.66-1.71)	0.84 (0.47-1.50)
T3	0.77 (0.56 (1.05)	0.77 (0.53-1.13)	0.91 (0.56-1.49)	0.57 (0.30-1.10)
P-trend	0.101	0.183	0.711	0.090
Meat-fish				
T1	Reference	Reference	Reference	Reference
T2	1.05 (0.77-1.44)	1.09 (0.76-1.56)	0.85 (0.52-1.40)	0.94 (0.52-1.71)
T3	1.26 (0.93-1.71)	1.52 (1.06-2.17)	1.03 (0.64-1.65)	1.23 (0.68-2.21)
P-trend	0.138	0.022	0.902	0.502

DQI-I, Diet Quality Index International; DASH, Dietary Approaches to Stop Hypertension; MDS, The Mediterranean Diet Score; T1, first tertile; T2, second tertile; T3, third tertile. *Data were presented as odds ratio (95% confidence intervals). Model 1: crude model; Model 2: adjusted for age, BMI, current smoker (yes/no), current drinker (yes/no), live alone (yes/no), being married (yes/no), education level (primary or below/ secondary and above), subjective social status (community ladder and Hong Kong ladder), CSID category (normal/ borderline/ probable dementia), no. of chronic diseases (0-1/ ≥ 2), depressive symptoms (yes/ no), PASE score, and daily energy intake.

Dietary Polyphenol Intake and cardiometabolic health in European adolescents

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Purpose The aim was to provide a better understanding of polyphenol intakes and its association with cardiovascular risk factors in European adolescents using the HELENA cross-sectional study in adolescents and the BELINDA study that followed up this population 10 years later as adult. First, polyphenol intakes, the main food contributions, and socio-demographic differences were determined. Next, the following associations were evaluated in the cross-sectional study: the metabolic syndrome risk, inflammatory biomarkers, and total antioxidant capacity. Longitudinally, the change of polyphenol intakes, the change in its main food contributors, and the association of polyphenol intakes with the metabolic syndrome risk were evaluated.

Background Polyphenols are bioactive compounds which may have potential health benefits on cardiovascular risk, i.e. metabolic syndrome (MetS) and inflammation (Amiot, Riva, & Vinet, 2016). However, inconsistent associations have been shown between dietary polyphenols and metabolic syndrome, inflammation or diseases (Chiva-Blanch & Badimon, 2017). Only certain polyphenols which are abundant in very specific foods have shown rather consistent findings in improving health status and preventing cardiovascular disease (Adriouch et al., 2018). Yet, very few studies have targeted youngsters. Since risk factors during adolescence may track into adulthood, studying the associations between dietary polyphenols and cardiovascular risk is needed to help early interventions in promoting healthy eating behaviour and preventing chronic diseases. Nevertheless, we are not aware of studies that explored the associations between the intake of a broad set of polyphenols and cardiovascular risk in adolescents.

Methods The HELENA-CSS was conducted from 2006 to 2007, in 3528 adolescents aged 12.5-17.5 years, randomized and stratified by geographical location, age and socio-economic status. Using the same methodology as in the HELENA study, the follow-up study BELINDA started in 2017, 10 years after the HELENA study.

Results The intake of total polyphenols was low with a lot of variation. The findings of our studies show that polyphenol intake may attribute to health. Associations of polyphenol intake

with lower BMI z-score and pro/anti-inflammatory ratio were found cross-sectionally, while the association between lignan intake and lower metabolic syndrome risk was detected in the longitudinal study. Nevertheless, some contradictory findings were cross-sectional negative associations with anti-inflammatory IL-10 and no association with serum total anti-oxidant capacity.

Conclusion Replication of these results in large-scale prospective cohort studies and using polyphenol biomarkers are needed to investigate specific mechanisms of individual polyphenols.

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A Meta Analysis Study Of Risk Factors For Diabetes Mellitus In Indonesia

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ABSTRACT

Purpose

The aim of this study is to examine the risk factors of diabetes mellitus in Indonesia.

Background

Diabetes mellitus is a serious public health issue especially in Indonesia. The Indonesian prevalence of diabetes is steadily increasing and leads Indonesia to have seventh largest number of diabetic patients. Several studies have indicated numerous risk factors for diabetes, nevertheless the results are obtained diverse.

Methods

This study is a quantitative study using meta-analysis method. The databases used to search for literature included Google Scholar, PubMed, DOAJ, Garuda, and ISJD published between 2000 until 2020. The risk factors analyzed was obesity, central obesity, and physical activity. This study was performed using RevMan version 5.3 to obtain combined effect (pooled odds ratio) and heterogeneity was measured by I^2 statistic.

Results

Of the 2,957 studies was screened, 41 studies were included into systematic review and only 15 studies met the eligibility criteria included to meta-analysis. The result showed a statistically significant association for all variables with the strongest risk factor for diabetes is physical activity (OR 3.21, 95% CI 2.25-4.60), then central obesity (OR 2.90, 95% CI 2.09-4.04), and obesity (OR 2.43, 95% CI 1.17-5.04).

Conclusion

Physical activity, central obesity, and obesity were modifiable risk factors of diabetes mellitus in Indonesia. People need to take care of nutritional status by maintain either body weight or waist circumference with healthy lifestyle and having adequate physical activity to help reduce the risk of diabetes mellitus.

Keywords : Diabetes mellitus, physical activity, obesity, meta analysis

Total Cholesterol and Blood Pressure Correlation in Hypertensive Patients at Kalidoni Primary Health Center

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Abstract

PURPOSE: The research will evaluate the correlation between levels of cholesterol and blood pressure in patients diagnosed with hypertension at Kalidoni Public Health Center, Palembang.

BACKGROUND: Non-communicable diseases are a significant health concern worldwide. The largest contributor is cardiovascular disease, with the major risk factor being hypertension, which is estimated to affect 1.13 billion people worldwide. Hypertension cases are also included in the metabolic syndrome component, which may increase the risk of multiple lifelong chronic diseases. Indonesia is a nation that is experiencing a growing prevalence of hypertension in addition to obesity and numerous other risk factors, such as lipid disorders. This is consistent with the major causes of death in Indonesia, namely stroke and coronary heart disease, which are closely linked to hypertension. On the other side, the link between hypertension and dyslipidemia is a combination that can worsen damage to the physiological structure of the blood vessels, such as endothelial changes and loss of vasomotor function. However, there are variations in data as to how powerful the relationship between the two variables is. This research will take place at the Kalidoni Health Centre, one of the primary health services in Palembang City. Hypertension cases rank second in the list of most diseases in this Health Facility, compounded by various factors such as the low achievement of the Minimum Service Standards (*Standar Pelayanan Minimal*) and internal factors such as lack of physical activity, knowledge, and lack of compliance with medication and routine control of the disease.

METHODS: This analytical observational study gathered data on risk factors and consequences simultaneously in adult patients diagnosed with hypertension and visited the Kalidoni Health Center in Palembang in December 2019. A total of 82 patients were chosen using the convenience sampling procedure. Demographic data, blood pressure, and cholesterol levels have been obtained. The statistical investigation was carried using descriptive analysis and a Spearman correlation using the Statistical Program for Social Sciences (SPSS®).

RESULTS: Correlation analysis revealed a strong positive correlation with moderate intensity between cholesterol and systolic blood pressure ($r = 0.509$, $p = 0.000$). In conjunction, there was also a significant weak positive correlation regarding body weight and diastolic blood pressure ($r = 0.279$; $p = 0.011$).

CONCLUSION: Blood cholesterol levels and systolic blood pressure have a significant positive correlation with moderate strength in patients suffering from hypertension at the Kalidoni Health Center. By understanding this association, it is hoped that it can be incorporated in a blood pressure control reg program that focuses not only on anti-hypertensive drugs but also on the inclusion of anti-hyperlipidemic drugs. Future studies may use comparisons with the general population (non-hypertensive controls) and evaluating broader variables, especially behavioral factors.

Correlation Between Independent Variable with Systolic and Diastolic Blood Pressure

Age			
Blood pressure	R	p	r²
Systolic	0,162	0,147	0,026
Diastolic	0,188	0,091	0,035
Gender			
Blood pressure	R	p	r²
Systolic	0,075	0,501	0,006
Diastolic	0,108	0,336	0,012
Total Cholesterol			
Blood pressure	R	p	r²
Systolic	0,509	0,000*	0,26
Diastolic	0,077	0,493	0,006
Body Weight			
Blood pressure	R	p	r²
Systolic	0,116	0,299	0,013
Diastolic	0,279	0,011*	0,078
Body height			
Blood pressure	R	p	r²
Systolic	-0,066	0,557	0,004
Diastolic	0,213	0,055	0,045
Body Mass Indeks			
Blood pressure	R	p	r²
Systolic	0,144	0,197	0,021
Diastolic	0,158	0,157	0,025



OP – B

**ECONOMIC AND AGING
SOCIETY**

&

**TECHNOLOGY AND
HEALTHCARE FOR AGING**



The Pattern of Labor Force Participation and Retirement of Older Persons: Review of Evidence from Advanced Economies and the Implications to Developing Asia

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Purpose

The paper reviews literature on the determinants of labor force participation and retirement decisions of older persons in advanced economies and examines whether the same determinants also help explain the employment pattern of older persons in developing Asia. Consequently, the paper attempts to identify existing pattern and prospects of labor force participation among older persons in developing Asia and shape future research agenda on this relevant yet relatively unexplored topic within the context of developing economies.

Background

As older individuals, including ones beyond statutory retirement ages, in many developing Asian countries remain active in the labor market, sustaining active working life plays a crucial role to adapt to the population aging. There are tasks for which ability naturally declines as one gets older but mature and older workers can remain productive. Improving health and education among the older cohorts are attuned to the efforts seeking to promote participation of older persons in the workplace, but these improvements are yet to be fully capitalized in many developing member countries in the region.

Methods

The paper conducts systematic review of relevant literature and comparative assessment of the labor force participation patterns among older persons in developing Asia and the OECD. The paper draws information largely from the labor force surveys of developing Asian countries under different stages of aging, i.e., Bangladesh, Indonesia, the Philippines, Sri Lanka, Thailand, and Viet Nam, and supplemented by demographic and health data.

Results

The labor force participation rates of individuals aged 60–64 in developing Asia is as high as that in advanced economies – moderately declining in Bangladesh, Philippines, and Thailand in recent years while on an uptrend in Sri Lanka. Based on our assessment, social security and pensions, education, health, household structures, and technological change have greatly

shaped the labor force participation of older persons in advanced economies. Upon comparing circumstances of older workers from the developing Asia, some of these factors are equally relevant while others are not or that the direction of influence is not uniform. For example, social security and pension reforms have significantly influenced the labor participation of older persons in advanced economies but its effect in many countries in developing Asia has remained modest. Likewise, the more educated old workers in advanced economies undergo phased retirement before fully giving up career while, in developing Asia, they tend to leave the labor market early and upon retirement, indicating the lack of career options or preference for permanent retirement.

Conclusions (including research implications)

Sustaining active working life plays a critical role in addressing the challenges while capturing opportunities related to population aging. Some of the identified determinants of labor force participation among older workers may have greater implication to the prospect of active aging in developing Asia where expansion of social security provision, and improvements in health and education are expected. The evidence thus far suggests that these developments may either incentivize or disincentivize older persons to work, which calls for further research overcoming the paucity of data understanding the labor supply behavior of older workforce in developing economies.

Empowering the Elderly: Implementation of Economic Function

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Purpose:

This study purposes to examine the association of implementing economic functions adhered to family and the participation of elderly on an economic activity group in Indonesia.

Background:

Just like many other developing countries, the level of aging population in Indonesia is expected to rise continuously nowadays. The number of elderly people is predicted to reach one fifth of the total population in 2045 (Sari et al., 2015). As one of the most populated country, it is the time for Indonesia to consider that the growing of aging population is a critical issue since it will impact hugely on health and socio-economic development.

In contrast, the elderly dependency ratio on the working age population shows an increase (Sari et al., 2015). It means that the burden of the working age population to cover elderly will rise as well. With the lack of social protection, the elderly people will be the most vulnerable population. A study reveals that around 85% of older people in Indonesia have no income (Kidd et al., 2017). Through the enactment of economic function that is adhered to family values and functions (i.e saving the money, being tenacious, etc), it is expected that the elderly will be involve intensively in economic activities. Therefore, they are likely to be financially independent and more empower.

Methods:

The current study was based on the Performance and Accountability Survey on Population, Family Planning, and Family Development Program held by BKKBN in 2019. There were 12,391 older people included in this analysis. This study employed descriptive analysis to show the distribution of frequency of the respondents based on their socio-economic characteristics. In addition, it applied correlation test to assess the association between implementing economic functions and the participation of elderly on economic activity.

Results:

Generally, the elderly had applied the economic functions as values in their families. Saving the money was the most popular behavior regarding economic function in the elderly's families. Moreover, almost 50% of the respondents cited they would be tenacious or working hardly to gather more money in order to prepare their future. Unfortunately, only 1,5% of the elderly participated in the economic activity group called UPPKS (Usaha Peningkatan Pendapatan

Keluarga Sejahtera). The correlation test showed that among elderly who applied more economic functions in family life tended to join in the economic activity.

Conclusion:

There was a relationship between implementing the economic function in family life and the participation in the economic activity group. Thus, embedding economic function in family is important to improve the elderly empowerment.

Keywords: elderly, economic function, empowerment.

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eHealth literacy and caregiving burden among family caregivers of older adults in Hong Kong

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Purpose

This project aimed to explore the relationship between level of eHealth literacy and caregiver's burden among family caregivers of older adults in Hong Kong.

Background

Care of older adults has been a major issue for families in the Hong Kong ageing population and the involvement in health-related decision making about their older family members is consider one of the challenges. This process of health-related decision making not only required one's ability to access to information, which were often retrieved from electronic media, but also the ability to process and evaluate the information obtained. In the literature, such ability is referred to as "eHealth literacy". Currently, there has been lack of local data to understand the level of eHealth literacy and its relationship with caregiving burden among family caregivers of older adults. Therefore, the aim of this project is to explore the relationship between level of eHealth literacy and caregiver's burden among family caregivers of older adults in Hong Kong.

Methods

Family caregivers of older adults were invited to complete a self-administered questionnaire in a local community setting. Inclusion criteria: (1) between 18 to 64 years old; (2) providing no less than 2 hour of care daily to a family member aged 60 years or older; and (3) possess and use a computer/ mobile device with access to internet. eHealth literacy were assessed using the Chinese eHealth Literacy Scale (C-eHEALS), of which has 8-items in a 5-point Likert-type format. The sum (10-40) will determine the level of eHealth literacy, with higher scores reflecting higher level of eHealth literacy. Caregiving burden were assessed using the 22-item Chinese version of the Zarit Caregiver Burden Interview (C- ZBI) in a 5-point Likert-type format. The sum provide a total score from 0-88, with higher scores reflecting higher level of

caregiving burden.

Results

Using a convenience sampling method, 100 family caregivers of older adults were identified. The majority of participants was between 40 to 59 (72.0%); 35.0% were male; 63.0% were in employment; and 67.0% completed education at secondary level of above. Many of their care recipients had 1 or more health problems such as chronic diseases (70.0%) and Dementia (25.0%). The mean of C- eHEALS and C-ZBI was 30.75 (SD 4.75) and 34.57 (SD 13.43) respectively. C-eHEALS were found to have a positive correlation with participant's education level ($r=0.21$; $p = 0.035$) and negative correlation with age ($r= -0.33$; $p = 0.001$). Interestingly, C-ZBI were found to have a negative correlation with the number of care recipients ($r = -0.26$; $p = 0.010$). Nevertheless, there was only a small but statistically insignificant relationship between C-eHEALS and C-ZBI.

Conclusion (including research implication and clinical implications)

This study provides empirical evidence on understanding the level of eHealth literacy among family caregivers of older adults in Hong Kong, and its relationship with their perceived caregiving burden. In light of the inconclusive results from this study, future health researchers may enhanced the understanding on the topic by adopting a larger sample size to compensate for the loss of precision.

Intentions for using ICT/IoT services and related factors among community-dwelling older people in Japan

Mahiro Fujisaki, Sueda Sakai

Abstract

Purpose: This study aimed to identify intentions for using Information and Communication Technology/Internet of Things services and related factors among Japanese older people.

Background: The demand for ICT/IoT services has been increasing in the aging society; however, the actual use and intention regarding ICT/IoT services in the older adult population have not been identified.

Methods: Data were collected from 1,177 households in a suburban town in East Japan. We asked about socio-demographic characteristics, support for trouble with digital devices, and use and intention regarding ICT/IoT services. The ICT/IoT services uses and intentions asked about included 12 items (landline phone, fax, mobile phone/PHS, smartphone, tablet device, wearable device, desktop PC, laptop, game console with Internet, home appliances with Internet, smart speaker, and smart home technology) and 14 items (gaming, getting new information, investigating route or traffic information, watching a movie or listening to the radio, reading a book or magazine, keeping time, making recordings, logging health information, monitoring the family or pets, shopping and reserving tickets, engaging in a cashless setting, communicating with family or friends, sharing photos or movies, and participating in online meetings or chatting), respectively. The association of socio-demographic characteristics, number of introduced ICT/IoT devices or services, support for trouble with digital devices, and intention for using ICT/IoT services were evaluated. In addition, multi-nominal logistic regression analyses were performed with the intention of using each ICT/IoT service, with possible answers of “already use,” “having interest but not using,” or “no interest,” as the dependent variable.

Results: Data from 496 older persons (164 who were 65–74 years old and 332 who were 75 years old or older) were analyzed. The percentage of smartphone users (77%) was the second highest after the percentage of landline phone users (96%). Multi-nominal logistic regression analyses revealed that living status was associated only with making recordings; those who had already made recordings were more likely to live alone than those who had no interest (odds ratio 2.47, 95%CI 1.22–4.99). The results that there was not significant difference between “no interest” and “having interest but not using” while there was significant differences between

“no interest” and “already using” were identified for the following five dependent variables: getting new information, watching a movie or listening to the radio, reading a book or magazine, keeping time, and communicating with family or friends. In particular, the potential factor mainly associated with the intention of using each ICT/IoT service was the number of supports for trouble with digital devices (odds ratio 1.25–3.81).

Conclusion: The results showed that community-dwelling older people in Japan use various ICT/IoT services. The differences between “no interest” vs. “having interest but not using” and “no interest” vs. “already using” might depend on the ease of imaging usage or convenience in introducing ICT/IoT services. For older people, their interests and use of ICT/IoT services might tend to be affected by support available for trouble with digital devices.

The role of Internet-based media use in delaying the cognitive decline of the elderly in Indonesia

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Abstract

Purpose: To assess the impact of Internet-based media use of elderly people, taking into account educational attainment and living areas, on the delay in cognitive decline by adopting the ICF scheme.

Background: Internet-based media use is beneficial in delaying age-related cognitive impairment in the elderly^[1]. However, the use of internet-based media requires older people to learn new skills. Early life education is necessary for cognitive activities and skills to slow the cognitive decline of the elderly^[2,3]. In addition, rural areas have less infrastructure development than urban areas, while the development of infrastructure could provide high-quality internet access.

Method: A cross-section analysis of the dataset of the 2018 Socio-Culture and Education Module of the National Socio-Economic Survey (Susenas-MSBP)^[4]. 16,504 elders aged 65 and over are eligible for the analysis unit. Cognitive decline is self-reported with at least some difficulty in remembering and concentrating, the domain of the UN Washington Group on Disability Statistics^[5,6]. Logistic regression analysis is performed.

Results: Cognitive decline in urban areas is associated with age groups 75-84 (AOR 1.24; 95% CI, 1.06-1.46) and 85+ (AOR 2.36; 95% CI, 1.78-3.12), unemployed (AOR 2.21; 95% CI, 1.85-2.65) and low intakes of plant and animal protein (AOR 1.27; 95% CI, 1.05-1.55). Cognitive decline is less likely to occur in urban elderly people who exercise less than 150 minutes per week (AOR 0.61; 95% CI, 0.47-0.79), without impaired vision (AOR 0.27; 95% CI, 0.24-0.32) and hearing (AOR 0.19; 95% CI, 0.16-0.22), and in interactions between internet-based media use and a high educational attainment (AOR 0.38; 95% CI, 0.17-0.89). However, the interaction between internet-based media use and educational attainment is not significantly associated with the cognitive decline of rural elders.

Conclusion: Educational attainment is important on the use of Internet-based media in preventing cognitive decline for urban elderly people. It is important to develop infrastructure that promotes the use of the Internet in rural areas.

Keywords: Internet-based media, education, cognitive, elderly

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Appendix.

Table 1. Cognitive function status and sociodemographic characteristics of the elderly, stratified by urban-rural areas

Variables		% Urban (<i>n</i> = 6,431) %	% Rural (<i>n</i> = 9,623) %	Total (<i>n</i> = 16,054) %
Age groups	65-74	70.5	66.8	68.3
	75-84	24.3	27.3	26.1
	85+	5.2	6.0	5.6
Education	Primary school and no education (low)	68.0	90.2	81.3
	More than primary education (high)	32.0	9.8	18.7
Physical exercise	No	81.7	94.9	89.6
	<150 minutes per week	12.5	3.8	7.3
	≥150 menit per week	5.8	1.3	3.1
Employment	Employed	29.7	42.3	37.3
	Unemployed	70.3	57.7	62.7
Protein intake on a weekly basis with 7 or less and more than 7 per week	High plant and high animal intake	33.3	20.2	25.5
	High plant and low animal intake	21.0	16.6	18.4
	Low plant and high animal intake	24.5	27.7	26.4
	Low plant and low animal intake	21.2	35.5	29.7
Vision Impairment	Yes, can't see	0.7	1.2	1.0
	Yes, severe difficulty	5.0	7.6	6.5
	Yes, some difficulty	25.5	31.5	29.1
	No difficulty	68.8	59.7	63.4
Impairment in hearing	Yes, can't hear	0.5	0.6	0.5
	Yes, severe difficulty	4.6	6.2	5.6
	Yes, some difficulty	18.2	20.5	19.6

	No difficulty	76.7	72.7	74.3
Internet-based media use (including FB, WA, twitter)	Yes	8.4	0.8	3.8
	No	91.6	99.2	96.2
Cognitive function (remembering dan concentrating)	Yes, can't remember/concentrate	1.1	1.4	1.3
	Yes, severe difficulty	3.8	5.0	4.5
	Yes, some difficulty	16.5	18.2	17.5
	No difficulty	78.6	75.4	76.7

Table 2. Multivariate logistic regression model for predictors of elderly people with cognitive decline, stratified by urban-rural areas

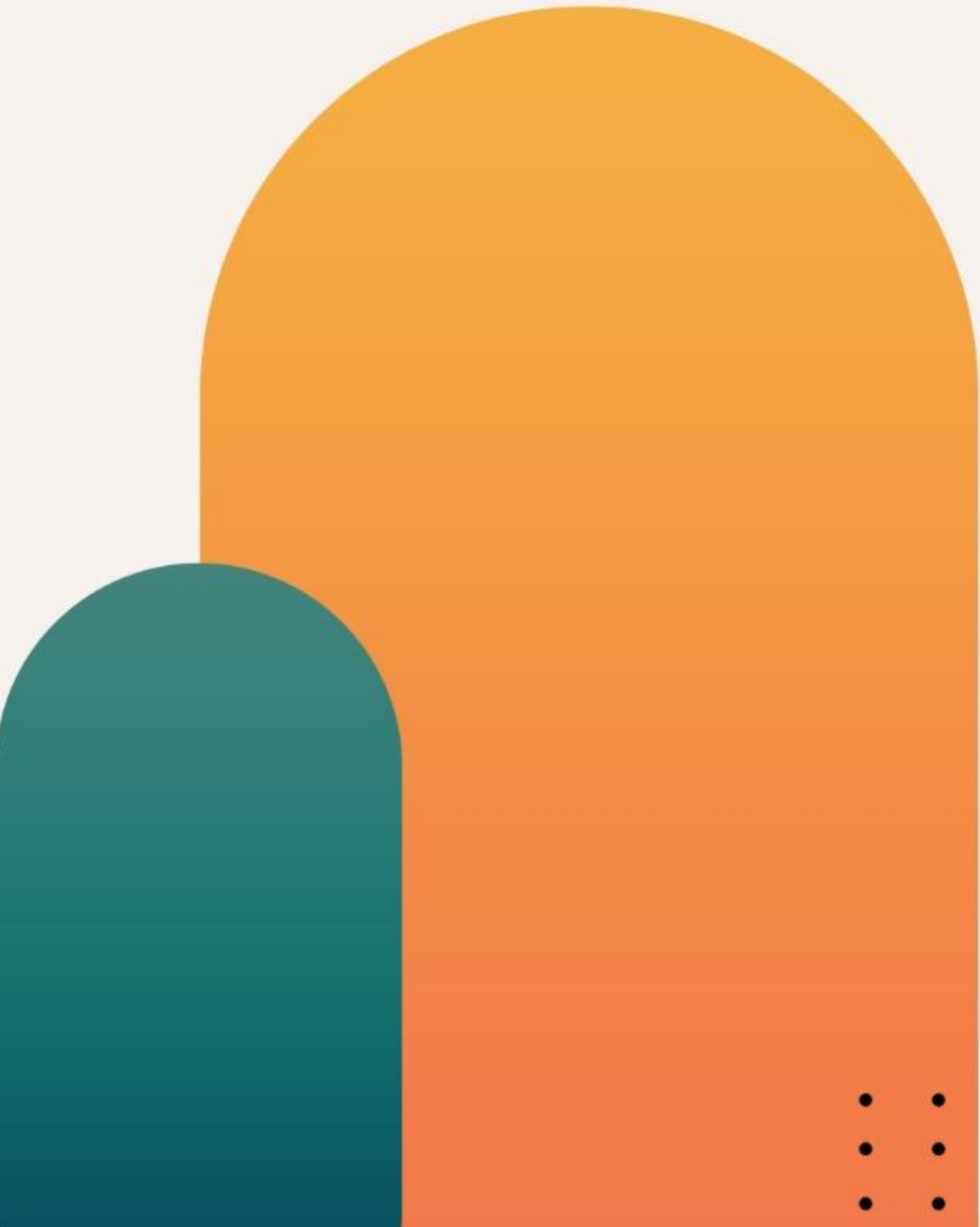
Variables	Urban (n = 6,431)			P- value	Rural (n = 9,623)			P- value
	OR	CI 95%			OR	CI 95%		
Age groups								
65-74	1.00				1.00			
75-84	1.24	1.06 - 1.46	0.008		1.50	1.33 - 1.69	0.000	
85+	2.36	1.78 - 3.12	0.000		1.73	1.40 - 2.14	0.000	
Physical exercise								
No	1.00				1.00			
<150 minutes per week	0.61	0.47 - 0.79	0.000		0.63	0.45 - 0.89	0.009	
≥150 menit per week	0.69	0.48 - 1.01	0.059		0.89	0.52 - 1.55	0.690	
Employment								
Employed	1.00				1.00			
Unemployed	2.21	1.85 - 2.65	0.000		2.15	1.89 - 2.44	0.000	
Protein intake								
High plant and high animal intake	1.00				1.00			
High plant and low animal intake	0.96	0.78 - 1.17	0.672		1.21	0.99 - 1.47	0.051	
Low plant and high animal intake	0.98	0.81 - 1.19	0.880		1.11	0.94 - 1.32	0.218	
Low plant and low animal intake	1.27	1.05 - 1.55	0.016		1.39	1.19 - 1.64	0.000	
Vision impairment								
Yes	1.00				1.00			
No	0.27	0.24 - 0.32	0.000		0.24	0.21 - 0.27	0.000	
Hearing impairment								
Yes	1.00				1.00			
No	0.19	0.16 - 0.22	0.000		0.22	0.19 - 0.24	0.000	
Internet-based media use and educational attainment								
Yes internet; low education	1.00				1.00			
Yes internet; high education	0.38	0.17 - 0.89	0.025		0.33	0.05 - 2.34	0.268	
No internet; low education	1.12	0.55 - 2.28	0.747		1.23	0.34 - 4.43	0.751	
No internet; high education	0.96	0.47 - 1.96	0.905		1.13	0.31 - 4.12	0.855	

p-value < 0.05 (sig)



OP - C

DEMENTIA & ALZHEIMER



Underweight Nutritional Status as a Predictor of Mortality Prognosis in Alzheimer

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Abstract

Purpose:

The research was conducted to determine the risk of mortality in Alzheimer's disease patients with underweight nutritional status and consider the urgency of nutritional maintenance as an important approach in Alzheimer's patients.

Background:

Alzheimer's disease is the most common type of dementia as it scored 30-35 million cases globally, mostly geriatric patients. Unfortunately, it also struck the top ten list of the world's deadliest diseases (World Health Organization 2020). Currently, no drugs are proven to treat people with Alzheimer's disease. The available approaches help the patient to maintain their physical function and wellbeing. It raises the possibility of conducting non-pharmacological treatment or other maintenance to escape from deteriorating health and death (Alzheimer's Dement 2020; 16 (3): 391-460). One of them is through nutritional status control that can be measured by BMI (Body Mass Index). This research will help to analyze the impact of underweight nutritional status on Alzheimer's mortality.

Methods:

This research used Pubmed, Scopus, Cochrane, and ScienceDirect to conduct paper findings. The keywords were “((Alzheimer's Disease) AND (Underweight) AND (Mortality))”. There are additional criteria to exclude and include the publications searched from every search engine. The inclusion criteria for the paper are English language, available in full-text, cohort prospective study, and conducted in the last ten years. Meta-analysis review with Revman 5 software calculated the average relative risk from all selected cohort studies.

Result:

The research process helps to identify 230 articles, of which three studies with 1423 patients were included (de Sousa et.al, Am J Alzheimers Dis Other Demen 2020;35:1533317520907168, Jang et.al, J Alzheimers Dis 2015;46(2):399-406, and Chen et.al, Dement Geriatr Cogn Disord

2019;48(1-2):93-104). The meta-analysis result showed significant differences in the relative risk of patients who died from Alzheimer's disease. Based on their BMI status, underweight patients have a higher risk than normal ones. (RR: 1.65, 95% CI: 1.32-2.06).

Conclusion:

Underweight nutritional status in Alzheimer's patients increases the risk of mortality compared to the individuals with normal nutritional status. The result suggests that Alzheimer's patients must maintain their nutritional status within normal range. This strategy will eventually help to maintain patients' quality of life by conducting a nutritional maintenance. Health practitioners need to establish correct therapy based on the patient's condition to lower down the mortality rate in Alzheimer's disease.

Physical Performance And Activity Differences Based On Gender In Community-Dwelling Older Adults With And Without Mild Cognitive Impairment

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Theme: Dementia and Alzheimer

Abstract

Background: Physical performance (PP) and activity (PA) declines with ageing. There is limited information about gender differences in physical performance (PP) and physical activity (PA) among Malaysian community-dwelling older adults with and without mild cognitive impairment (MCI).

Purpose: The aim of this study was to examine PP and PA differences in older adults stratified by gender.

Methods: Data of this study was taken from Wave 3 of a large scale population-based study on neuroprotective model for healthy longevity in older adults (LRGS TUA). PP measures consisted of endurance, upper and lower limb muscle strength, upper and lower body flexibility, functional mobility and was measured using 2 Minutes Step test (2MST), Dominant Hand grip test (HGT), Back Scratch test (BST), Sit to stand test, (STS), Sit and Reach test (SRT), Timed-Up and Go test (TUG) and 6 meter Gait speed test (GST). PASE questionnaire was used to assess PA. Cognitive status was assessed using TUA- Wellness screening tool, which consists of global cognition: Mini Mental Status Examination (MMSE), attention and working memory: Digit Span and verbal memory: Rey Auditory Verbal Learning Test (RAVLT). Data of 779 older adults (mean age: men= 372 [71 ± 5.2], women= 407 [70.2 ±5.4]) who completed all cognitive and physical measurements were analysed using One-way ANOVA.

Results: Prevalence of MCI was higher in men (19%) compared to women (17%). In comparison to PP and PA measures, men with MCI scored significantly lower scores ($p < 0.05$) than men without MCI in only lower limb muscle strength. Whereas, women with MCI scored significantly lower ($p < 0.05$) in lower body flexibility than women without MCI. There was no significant difference in PA between MCI and non-MCI groups in both genders.

Conclusion and Clinical Implications: These results suggest lower muscle strength and flexibility in older men and women with MCI respectively compared to those without MCI.

Prevention and management strategies for PP decline should be gender and cognitive status specific. Whereas, similar PA prescription should be recommended for all older adults.

Keywords: Older adults, physical activity, physical performance, mild cognitive impairment, community-dwelling

Table 1: Mean (SD) of Physical Performance and Physical Activity Based on Gender and Cognitive Status at Wave 3 (36 months) in Older Adults Without and With Mild Cognitive Impairment

Parameters	Men			Women		
	Without MCI (n=313)	With MCI (n=59)	p-value	Without MCI (n=348)	With MCI (n=59)	p-value
2Min Step Test (reps)	67.9 (18.8)	64.0 (17.7)	0.141	58.4 (21.0)	58.7 (21.6)	0.934
Hand Grip Test (kg)	28.1 (6.2)	27.7 (5.9)	0.614	19.1 (4.4)	19.3 (4.7)	0.739
Chair Stand test (reps)	10.8 (2.3)	10.0 (2.0)	0.010*	10.2 (2.5)	10.4 (2.5)	0.494
Sit and Reach Test (cm)	-3.7 (11.6)	-6.1 (12.6)	0.147	-3.1 (11.5)	-7.8 (12.5)	0.005*
Timed-Up-and-Go test (s)	11.0 (2.4)	11.6 (2.6)	0.138	12.0 (2.9)	11.8 (3.2)	0.710
Back Scratch Test (cm)	-18.4 (14.1)	-22.2 (14.4)	0.061	-13.4 (12.5)	-15.4 (13.0)	0.259
Gait Speed test (s)	6.7 (1.5)	6.8 (1.4)	0.662	7.3 (1.7)	7.2 (1.6)	0.627
PASE (score)	93.7 (39.0)	92.2 (40.7)	0.794	86.8 (36.7)	79.2 (35.3)	0.141

*Significant difference at $p < 0.05$ (95% CI), using One-way ANOVA

Gender differences in dementia knowledge? -The correlation between dementia knowledge and sociodemographic factors by gender in middle-aged population in Indonesia

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5. Professor, Graduate School of Medicine, International University of Health and Welfare, Tokyo, Japan

Purpose: This study aimed to investigate gender differences in sociodemographic factors associated with dementia knowledge among middle-aged adults in Indonesia.

Background: The number of people with dementia has been increasing by 10 million every year globally, with 60% living in low- and middle-income countries (World Health Organization, 2020). In Indonesia, it is estimated to reach 11.6 in 1,000 people in 2050; expected to be doubled from 2019 (Organisation for Economic Co-operation and Development, 2019). Despite the situation, little study has been conducted on dementia knowledge among the general Indonesian population. In this study, we investigated the association between dementia knowledge and sociodemographic factors by gender among middle-aged population in Indonesia.

Methods: A cross-sectional online survey was conducted from May to June 2020 in Indonesia. Middle-aged adults between 40 and 59 years were recruited to assess dementia knowledge (25-item Dementia Knowledge Assessment Scale (DKAS)) and sociodemographic factors (age, education, occupation, and living arrangement). We received 1,157 responses including 10 incomplete ones, the remaining 1,147 responses (420 men and 727 women) were submitted to the final analysis. We considered those who scored > third quartile in total DKAS and its subscales (Causes and Characteristics, Communication and Behavior, Care Considerations, and Risk Factors and Health Promotion (RFHP)) as having “good” knowledge for dementia. To estimate the association between dementia knowledge and sociodemographic factors by gender, a multivariable logistic regression model was used. We analyzed data using IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Chicago, IL, USA), and the level of significance was set at $p < 0.05$.

Results: In total DKAS, the younger age (adjusted odds ratio (aOR)=2.27 (95% confidence interval (CI): 1.17-4.40) for aged 45-49 years, aOR=1.89 (1.02-3.51) for aged 40-44 years) and >university education (aOR=8.13 (2.40-27.50)) were associated with better knowledge of dementia in women, while no significant association was observed in men. With Causes and Characteristics for dementia knowledge, higher education (<high school: aOR=0.14 (0.05-0.44), >university: aOR=0.24 (0.08-0.71)) and professional occupation (aOR=2.14 (1.02-4.46)) were associated in men. In women, aged between 45-49 years (aOR=2.56 (1.35-4.86)), higher education (aOR=2.22 (1.03-4.79)), and unemployed (aOR=0.51 (0.32-0.85)) were associated with the Causes and Characteristics. Men who aged 45-49 years (aOR=2.69 (1.17-6.14)), and were private employees (aOR=0.37 (0.20-0.68)) and entrepreneur (aOR=0.33 (0.16-0.68)) showed association with better knowledge for Communication of dementia. With the Care Considerations, no association was observed in men, whereas the association for higher education (aOR=13.07 (3.04-56.15)) and occupation of the entrepreneur (aOR=2.04 (1.00-4.17)) were observed in women. Men showed the association of higher knowledge for the RFHP with living arrangement (living together with elderly: aOR=0.47 (0.26-0.83)), and having elderly member but not living together: aOR=0.53 (0.29-0.96)), and women showed the association with >university education (aOR=3.03 (1.27-7.22)).

Conclusion: We found gender differences in the models of various dementia knowledge significantly associated with sociodemographic factors. Giving that, educational programs for dementia would be needed, with consideration of the different aspects for middle-aged men and women in Indonesia.

Table 1. Association between total Dementia Knowledge Assessment Scale and sociodemographic factors												
	Male						Female					
	OR	95% CI	p	aOR ^a	95% CI	p	OR	95% CI	p	aOR ^a	95% CI	p
Age												
40-44	0.73	(0.34 - 1.57)	0.421	0.72	(0.32 - 1.61)	0.424	1.92	(1.07 - 3.42)	0.028	1.89	(1.02 - 3.51)	0.042
45-49	1.01	(0.46 - 2.20)	0.988	1.07	(0.47 - 2.45)	0.872	1.89	(1.01 - 3.53)	0.046	2.27	(1.17 - 4.40)	0.016
50-54	0.79	(0.37 - 1.69)	0.543	0.78	(0.35 - 1.73)	0.539	1.30	(0.71 - 2.37)	0.389	1.33	(0.71 - 2.49)	0.369
55-59	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Education												
<Junior High school	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
<High school	0.68	(0.18 - 2.65)	0.578	0.63	(0.16 - 2.54)	0.520	2.88	(0.83 - 10.00)	0.097	2.79	(0.79 - 9.81)	0.110
>University	1.41	(0.39 - 5.04)	0.601	1.04	(0.28 - 3.94)	0.951	9.64	(2.96 - 31.39)	0.000	8.13	(2.40 - 27.50)	0.001
Occupation												
Civil Servant	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Professional	2.07	(0.99 - 4.33)	0.054	2.08	(0.98 - 4.42)	0.056	1.75	(1.12 - 2.74)	0.014	1.50	(0.94 - 2.38)	0.090
Private employee	0.62	(0.33 - 1.19)	0.153	0.71	(0.36 - 1.41)	0.325	0.77	(0.48 - 1.21)	0.256	0.67	(0.41 - 1.09)	0.106
Entrepreneur	0.59	(0.28 - 1.24)	0.165	0.78	(0.35 - 1.74)	0.540	0.51	(0.25 - 1.06)	0.070	0.68	(0.32 - 1.46)	0.327
Unemployed	0.67	(0.07 - 6.07)	0.722	0.75	(0.08 - 7.08)	0.801	0.50	(0.32 - 0.79)	0.003	0.79	(0.48 - 1.30)	0.353
Living arrangement												
No elderly member	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Living together with elderly	0.53	(0.30 - 0.94)	0.030	0.60	(0.32 - 1.11)	0.105	1.17	(0.81 - 1.69)	0.406	1.16	(0.78 - 1.72)	0.460
Having elderly member but not living together	0.63	(0.34 - 1.17)	0.143	0.62	(0.33 - 1.19)	0.151	1.39	(0.94 - 2.07)	0.100	1.17	(0.77 - 1.78)	0.459

Table 2a. Association between causes and characteristics of Dementia Knowledge Assessment Scale and sociodemographic factors																					
	Male							Female													
	OR	95% CI	p	aOR ^a	95% CI	p	OR	95% CI	p	aOR ^a	95% CI	p	OR	95% CI	p	aOR ^a	95% CI	p			
Age																					
40-44	0.84	(0.41 - 1.74)	0.640	0.81	(0.37 - 1.79)	0.608	2.07	(1.18 - 3.62)	0.011	2.19	(1.20 - 3.97)	0.010	1.47	(0.70 - 3.07)	0.312	1.72	(0.77 - 3.82)	0.184	2.14	(1.17 - 3.92)	0.014
45-49	1.47	(0.70 - 3.07)	0.312	1.72	(0.77 - 3.82)	0.184	2.14	(1.17 - 3.92)	0.014	2.56	(1.35 - 4.86)	0.004	0.72	(0.34 - 1.51)	0.382	0.66	(0.30 - 1.46)	0.304	1.88	(1.06 - 3.33)	0.031
50-54	0.72	(0.34 - 1.51)	0.382	0.66	(0.30 - 1.46)	0.304	1.88	(1.06 - 3.33)	0.031	1.98	(1.09 - 3.60)	0.024	1.00	(reference)		1.00	(reference)		1.00	(reference)	
55-59	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Education																					
<Junior High school	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
<High school	0.18	(0.06 - 0.52)	0.002	0.14	(0.05 - 0.44)	0.001	1.00	(0.45 - 2.22)	0.998	0.91	(0.40 - 2.06)	0.822	0.40	(0.15 - 1.08)	0.071	0.24	(0.08 - 0.71)	0.009	3.25	(1.59 - 6.64)	0.001
>University	0.40	(0.15 - 1.08)	0.071	0.24	(0.08 - 0.71)	0.009	3.25	(1.59 - 6.64)	0.001	2.22	(1.03 - 4.79)	0.042	1.00	(reference)		1.00	(reference)		1.00	(reference)	
Occupation																					
Civil Servant	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Professional	2.15	(1.05 - 4.40)	0.035	2.14	(1.02 - 4.46)	0.043	1.36	(0.88 - 2.11)	0.168	1.23	(0.78 - 1.95)	0.369	0.69	(0.37 - 1.26)	0.223	0.64	(0.33 - 1.24)	0.189	0.81	(0.53 - 1.25)	0.350
Private employee	0.69	(0.37 - 1.26)	0.223	0.64	(0.33 - 1.24)	0.189	0.81	(0.53 - 1.25)	0.350	0.75	(0.47 - 1.18)	0.208	0.53	(0.26 - 1.09)	0.082	0.63	(0.28 - 1.38)	0.244	0.41	(0.21 - 0.82)	0.012
Entrepreneur	0.53	(0.26 - 1.09)	0.082	0.63	(0.28 - 1.38)	0.244	0.41	(0.21 - 0.82)	0.012	0.51	(0.25 - 1.05)	0.069	1.39	(0.24 - 8.11)	0.714	1.27	(0.20 - 8.18)	0.804	0.38	(0.25 - 0.58)	0.000
Unemployed	1.39	(0.24 - 8.11)	0.714	1.27	(0.20 - 8.18)	0.804	0.38	(0.25 - 0.58)	0.000	0.51	(0.32 - 0.82)	0.006	1.00	(reference)		1.00	(reference)		1.00	(reference)	
Living arrangement																					
No elderly member	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Living together with elderly	0.56	(0.32 - 0.95)	0.031	0.64	(0.36 - 1.16)	0.144	0.91	(0.64 - 1.29)	0.590	0.93	(0.64 - 1.35)	0.691	0.58	(0.32 - 1.05)	0.072	0.56	(0.30 - 1.06)	0.076	1.02	(0.70 - 1.48)	0.939
Having elderly member but not living together	0.58	(0.32 - 1.05)	0.072	0.56	(0.30 - 1.06)	0.076	1.02	(0.70 - 1.48)	0.939	0.88	(0.59 - 1.31)	0.520									

Table 2b. Association between communication and behaviour of Dementia Knowledge Assessment Scale and sociodemographic factors												
	Male						Female					
	OR	95% CI	p	aOR ^a	95% CI	p	OR	95% CI	p	aOR ^a	95% CI	p
Age												
40-44	1.76	(0.83 - 3.74)	0.142	1.77	(0.80 - 3.93)	0.158	1.08	(0.64 - 1.84)	0.765	1.01	(0.58 - 1.76)	0.961
45-49	2.19	(1.00 - 4.78)	0.049	2.69	(1.17 - 6.14)	0.019	1.32	(0.74 - 2.35)	0.342	1.38	(0.76 - 2.51)	0.284
50-54	1.57	(0.73 - 3.36)	0.247	1.96	(0.87 - 4.38)	0.102	0.80	(0.46 - 1.39)	0.434	0.81	(0.46 - 1.42)	0.465
55-59	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Education												
<Junior High school	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
<High school	1.01	(0.31 - 3.35)	0.986	0.84	(0.24 - 2.89)	0.781	0.72	(0.35 - 1.49)	0.377	0.66	(0.32 - 1.40)	0.279
>University	1.45	(0.46 - 4.58)	0.525	0.79	(0.24 - 2.64)	0.701	1.44	(0.75 - 2.74)	0.270	1.06	(0.52 - 2.15)	0.865
Occupation												
Civil Servant	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Professional	1.50	(0.76 - 2.97)	0.241	1.51	(0.75 - 3.02)	0.246	1.43	(0.91 - 2.23)	0.121	1.31	(0.83 - 2.09)	0.248
Private employee	0.44	(0.25 - 0.78)	0.004	0.37	(0.20 - 0.68)	0.001	0.94	(0.60 - 1.47)	0.782	0.85	(0.53 - 1.35)	0.486
Entrepreneur	0.37	(0.19 - 0.71)	0.003	0.33	(0.16 - 0.68)	0.003	0.56	(0.28 - 1.14)	0.108	0.61	(0.29 - 1.27)	0.186
Unemployed	0.78	(0.14 - 4.49)	0.780	0.80	(0.13 - 4.80)	0.805	0.60	(0.39 - 0.93)	0.022	0.65	(0.40 - 1.06)	0.087
Living arrangement												
No elderly member	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Living together with elderly	0.93	(0.56 - 1.53)	0.759	1.31	(0.75 - 2.29)	0.335	1.19	(0.83 - 1.71)	0.342	1.22	(0.84 - 1.78)	0.293
Having elderly member but not living together	1.33	(0.78 - 2.25)	0.292	1.37	(0.78 - 2.41)	0.274	1.33	(0.90 - 1.97)	0.152	1.28	(0.85 - 1.92)	0.235

Table 2c. Association between care consideration score in Dementia Knowledge Assessment Scale and sociodemographic factors												
	Male						Female					
	OR	95% CI	p	aOR ^a	95% CI	p	OR	95% CI	p	aOR ^a	95% CI	p
Age												
40-44	0.90	(0.41 - 2.00)	0.803	0.80	(0.35 - 1.87)	0.610	1.60	(0.90 - 2.87)	0.112	1.37	(0.74 - 2.53)	0.322
45-49	1.64	(0.74 - 3.62)	0.224	1.77	(0.76 - 4.13)	0.188	1.57	(0.83 - 2.95)	0.165	1.66	(0.85 - 3.22)	0.138
50-54	0.88	(0.40 - 1.96)	0.758	0.91	(0.39 - 2.12)	0.820	1.14	(0.62 - 2.08)	0.683	1.07	(0.57 - 2.01)	0.824
55-59	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Education												
<Junior High school	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
<High school	0.58	(0.15 - 2.28)	0.434	0.53	(0.13 - 2.19)	0.381	4.19	(0.95 - 18.46)	0.058	4.05	(0.91 - 17.98)	0.066
>University	1.49	(0.42 - 5.34)	0.540	1.07	(0.28 - 4.10)	0.919	12.43	(2.99 - 51.77)	0.001	13.07	(3.04 - 56.15)	0.001
Occupation												
Civil Servant	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Professional	2.39	(1.14 - 5.01)	0.022	2.24	(1.05 - 4.79)	0.037	1.75	(1.10 - 2.79)	0.019	1.53	(0.94 - 2.49)	0.083
Private employee	0.79	(0.42 - 1.49)	0.463	0.77	(0.39 - 1.52)	0.446	1.07	(0.67 - 1.73)	0.777	0.98	(0.59 - 1.62)	0.935
Entrepreneur	0.44	(0.20 - 0.99)	0.048	0.48	(0.20 - 1.15)	0.099	1.35	(0.70 - 2.60)	0.378	2.04	(1.00 - 4.17)	0.049
Unemployed	1.79	(0.30 - 10.53)	0.520	2.27	(0.36 - 14.25)	0.384	0.73	(0.46 - 1.16)	0.179	1.24	(0.74 - 2.07)	0.409
Living arrangement												
No elderly member	1.00	(reference)		1.00	(reference)		1.00	(reference)		1.00	(reference)	
Living together with elderly	0.88	(0.51 - 1.51)	0.637	1.17	(0.64 - 2.14)	0.607	1.38	(0.94 - 2.03)	0.100	1.34	(0.90 - 2.01)	0.154
Having elderly member but not living together	0.68	(0.36 - 1.28)	0.232	0.68	(0.35 - 1.34)	0.268	1.75	(1.17 - 2.63)	0.007	1.49	(0.97 - 2.29)	0.068

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EDUCATION

Doctor of Philosophy in Medical Science

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PUBLICATIONS

Tondokoro T, Nakata A, Otsuka Y, Yanagihara N, Anan A, Kodama H, Satoh N. Effects of participatory workplace improvement program on stress-related biomarkers and self-reported stress among university hospital nurses: A preliminary study. *Ind Health*, 2021 (in press)

Tondokoro T. (2018) Prosthetics and Orthotics (*Gishisougugaku*) ed. Saeki S, *Igakushoin*, Tokyo, 220-221

PRESENTATIONS

Tondokoro T, Nakata A, Otsuka Y, et al. Does happiness matter? A participatory intervention program to improve workplace stress may differ by happiness levels among university hospital nurses. the 13th International Conference on Occupational Stress and Health, Philadelphia, PA, USA (November 2019)

Tondokoro T, Nakata A. Co-occurrence of insomnia with migraine: A population-based study in a large working population in Japan. World Sleep 2019 Congress, Vancouver, Canada (September 2019)

Tondokoro T, Nakata A. Differential association of psychosocial job stress with migraine and tension-type headache in male and female Japanese Workers. the 1st Conference of Asia Pacific Academy for Psychosocial Factors at Work, Auckland, New Zealand (November 2018)

AWARDS

Work-in-Progress Award, the 13th International Conference on Occupational Stress and Health, Philadelphia, PA, USA (November 2019)

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Chronic Diseases and Cognitive Impairment Among Older Adults: Results of The Fifth Wave of Indonesia Family Life Survey (IFLS5)

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ABSTRACT

Purpose

This study aims to identify the characteristics of older adults (aged 50 and above), the percentage of cognitive impairment, the percentage of chronic diseases, as well as the association between chronic diseases and cognitive impairment in Indonesian older adults.

Background

The increasing number of older adults in many countries, including Indonesia, inflicts various health concerns which one of them is cognitive impairment. Though the most commonly known risk factor of cognitive impairment is advancing age, several health-related factors including stroke, hypertension, and diabetes are also associated with the acceleration of cognitive decline. This research becomes more interesting as there is still limited number of studies conducted at the national level regarding cognitive impairment (including mild cognitive impairment/MCI, cognitive impairment no dementia/CIND, as well as dementia) among older adults in Indonesia.

Methods

This study was conducted cross-sectionally using data from The Fifth Wave of Indonesia Family Life Survey (IFLS5). Cognitive impairment was measured through the modified Telephone Interview for Cognitive Status (TICS) instrument in IFLS5. While chronic diseases and other variables were obtained from the answers given by respondents during the survey. The cross-sectional weight with attrition was used in this study. The respondents have been stratified by province, urban-rural sector of residence, sex, and age, so that it will be representative of the Indonesian population living in the 13 IFLS provinces in 2014.

Results

The percentage of older adults with cognitive impairment in Indonesia was slightly higher at 51,45% compared to those with normal cognitive function (table 1). Out of 5258 respondents with cognitive impairment, 66,43% were having CIND while the remaining others were categorized as people with dementia.

Table 1. Cognitive status of Indonesian older adults, 2014 – 2015

Cognitive Status	n %	5% CI	
		Lower	Upper
Normal	4.962	48,55	47,23 49,88
Cognitive Impairment	5.258	51,45	50,12 52,78
Cognitive Impairment	3.493	66,43	64,64 68,18
(CIND) Dementia	1.765	33,57	31,82 35,36

The final model of the multivariate analysis revealed the interaction between chronic diseases and physical activity in effecting the chance of cognitive impairment among older adults (table 2).

Table 2. Logistic regression of cognitive impairment and other covariates, 2014 – 2015

Variable	OR	SE	95% CI		P > t	P > GoF
			Lower	Upper		
Chronic Disease						
No Chronic Disease	(Reference)					
Hypertension	0,95	0,0813	0,80	1,13	0,566	
Diabetes	0,45	0,1625	0,22	0,91	0,027	
Both Hypertension and Diabetes	0,69	0,1268	0,48	0,99	0,043	
Age Category						
Pre-elderly (50 – 59)	(Reference)					
Youngest-old (60 – 69)	1,32	0,0910	1,15	1,51	0,000	
Middle-old (70 – 79)	3,14	0,3385	2,54	3,88	0,000	
Oldest-old (80 and above)	11,12	3,9572	5,53	22,34	0,000	0,9402
Education Background						
High Education Level	(Reference)					
Medium Education Level	3,32	0,3277	2,74	4,03	0,000	
Low Education Level	13,54	1,3055	11,21	16,36	0,000	
Physical Activity						
Active	(Reference)					
Less Active	1,02	0,1036	0,83	1,24	0,867	
Chronic Disease*Physical Activity						
Hypertension*Less Active	1,14	0,1514	0,88	1,48	0,317	
Diabetes*Less Active	2,55	1,1683	1,04	6,26	0,040	
Both Hypertension and Diabetes*Less Active	1,73	0,4434	1,05	2,86	0,031	

In older adults with less physical activity, the odds ratio of cognitive impairment in those with both hypertension and diabetes are 1,73 (95% CI = 0,47 – 3,03) times higher than those with no history of illness. Meanwhile, the odds ratios of cognitive impairment in physically

less active older adults with only hypertension and only diabetes, compared to those with no history of illness, are 1,14 (95% CI = 0,88 – 1,48) and 2,55 (95% CI = 1,04 – 6,26) respectively (table 2).

Conclusion

Cognitive impairment is considered as a public health challenge in Indonesia with its proportion reaching more than 50% among older adults in 2014. This study has shown that older adults with chronic diseases and less physical activity are more likely to experience cognitive impairment than those with no history of illness. It is expected that the results that have been implied in this study can underlie the development of various elderly health programs in Indonesia, specifically the one that can reduce the risks of dementia in later life.

Keywords: Cognitive Impairment, Hypertension, Diabetes, Chronic Diseases, Older Adults

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Dementia in China: Clinical and Epidemiological Studies.

Brendan Stuart Weekes

Universities of Hong Kong and Cambridge

Abstract

Our goal was to isolate differences in communication skills between Chinese speakers with probable Alzheimer's Disease or Other Dementia (ADOD) and healthy controls in a case-control study of 25,000 community-dwelling seniors in Mainland China. 1300 seniors with ADOD based on an assessment of cognitive skills were matched to 2600 cognitively intact controls. Logistic regression revealed variables that discriminate ADOD from controls including a larger proportion with APOE-ε4 heterozygote and homozygote; asthma; diabetes and stroke but fewer recreational activities, exercise, reading. We found ADOD patients had less engagement in neighbourhood and social activities suggesting communication difficulties. ADOD patients in China present with risk factors reported for patients in international studies. Our results suggest that patients could benefit from greater social engagement with focus on communication having implications for clinicians who use cognitive rehabilitation and speech therapy.

Introduction

Cognitive impairment is a defining feature of Alzheimer's Disease (AD). The risk of minimal cognitive impairment (MCI) converting to AD is up to 6.4 times greater than healthy ageing controls. Although some biomarkers increase risk for developing AD e.g. apolipoprotein E (ApOE), asthma, diabetes and stroke, many variables mitigate expression of risk into AD e.g., cognitive rehabilitation, bilingualism, education, exercise, games, neighbourhood and social engagement. Therefore, it is advisable for seniors at risk of ADOD to manage their lifestyles with interventions that promote communication skills in order to retain brain health and reduce the risk of AD. Early identification of risk factors such as behaviour and biomarkers, allow targeted prevention for high-risk groups using interventions that effectively delay development of AD and thus reduce the burden of disease.

Method

A random sample of urban and rural residents aged 60 and above was selected from a total of 24,000 respondents who participated in a larger study. The project was passed by the review panel of the Ethics Committee of the Center for Prevention and Control of Chronic Non-Communicable Diseases of the Chinese Center for Disease Control and Prevention.

Result

Single-factor analyses of significant variables that distinguish AD cases from controls were more cases of (1) ApoE genotypes; (2) asthma, hypertension and stroke; (3) lower levels of education and illiteracy; (4) neighbourhood engagement including conversations; (5) social activity; (6) daily tea drinking; (7) exercise, (8) reading newspapers; (9) playing games (cards or mahjong); and (10) using computers all p 's<0.05.

Discussion

Our findings suggest that probable AD patients should be engaged in cognitive activities including daily communication with carers, family and neighbours. Communication skills have a positive effect on preserving cognitive function and avoiding AD. Speech therapy administered by bilingual and multilingual clinicians is vital for preventing AD in China.

Conclusion

Future work will focus of capacity building from a scientific evidence base to (1) strengthen and transform health, wellness and social services in Greater China; (2) to maximise equity, functional ability, autonomy, and dignity of ageing populations in Greater China; and (3) to identify limitations of global monitoring frameworks and Universal Health Coverage (WHO) indicators that better capture health system responses to healthy ageing in Greater China.

Does Community Participation Increase the Role of Education in Preventing Dementia Among the Elderly?

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Background:

Around 35 million people around the world suffered from dementia disease in 2010, with most of the people suffering from dementia disease being mostly from developing countries. Many studies linked education and social engagement with a lower risk of prevalence of dementia disease. This study aims to examine the association between individuals' community participation, educational attainment, and their dementia disease risk.

Methods:

We measured community participation based on 8 items of Community participation questions in the Indonesian Family Life Survey 5 (IFLS5) in 2014. We use interaction term of years of schooling and dummy variable community participation in a probit regression model to estimate the effect of community participation in increasing the role of education in preventing dementia among the elderly.

Results:

We found that socially active elderly will increase the effect of educational attainment to lower the probability of dementia disease risk. An elderly person who has one year of schooling will have 1.7 per cent lower dementia disease. Community participation activities will lower about 0.07 per cent of the risk.

Conclusion

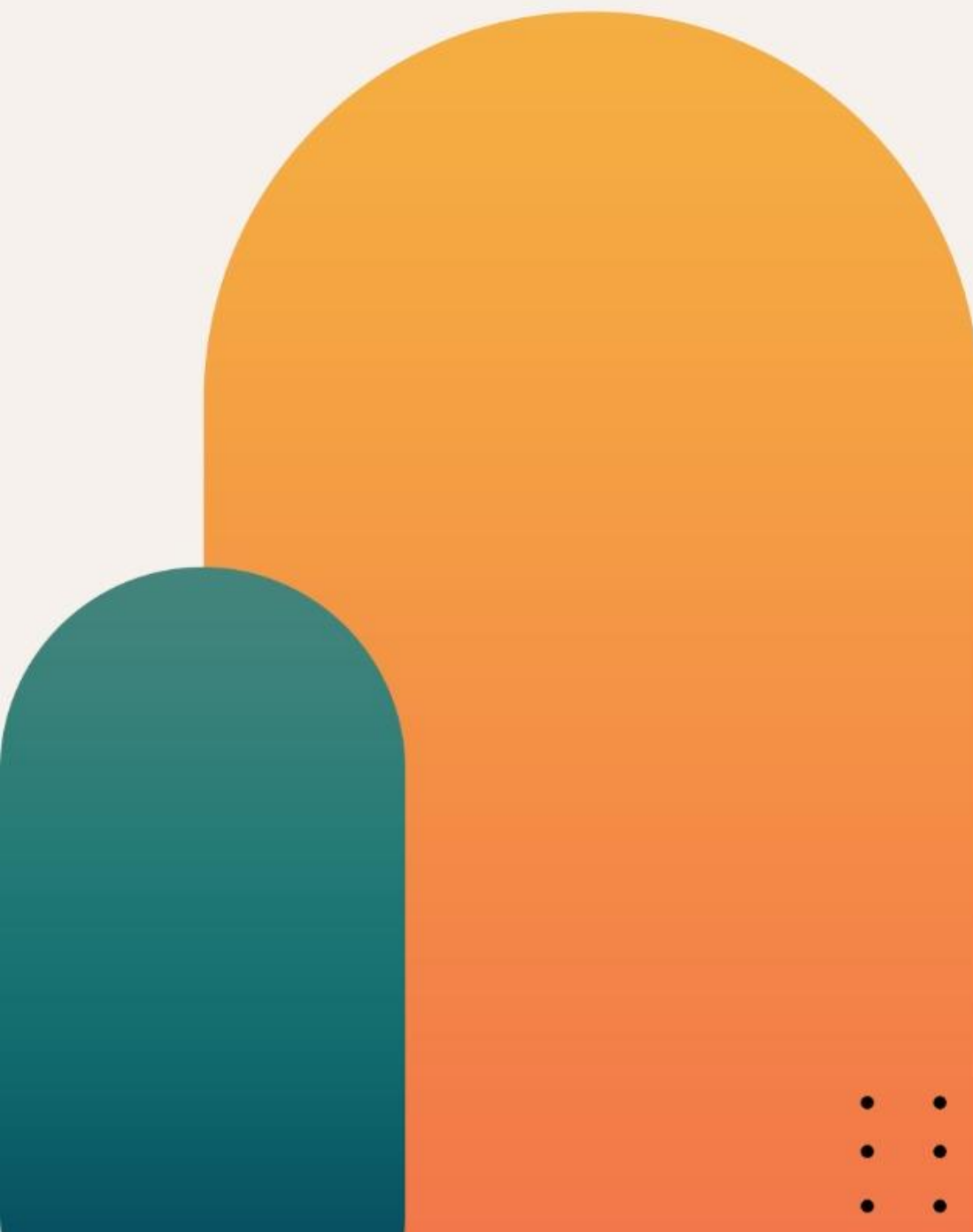
This study shows that community participation strengthens the role of educational attainment in preventing dementia disease risk: the more socially active, the lower the dementia disease risk would be.

Keywords: Dementia; Education; Community Participation.



OP - D

POPULATION AGING IN THE COVID-19 ERA



The Mental Health Impact of Pandemic Covid-19 in elderly

(A study on factor associated to Sleep Deprivation, losing appetite and Psychosomatic symptom)

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**Presenter

Purpose :

This study sought to elucidate the factors associated with sleep deprivation, losing appetite and psychosomatic symptom as part of mental health issues in elderly during the Pandemic of Covid-19.

Introduction:

The COVID-19 pandemic has had an unprecedented effect on the lives of people, irrespective of social demographics. The older adult may face significant fallout with regard to their mental and psychological wellbeing. During this pandemic, older adults experienced disproportionately greater adverse effects from the pandemic including more severe complications, higher mortality, concerns about disruptions to their daily routines and access to care, difficulty in adapting to technologies like telemedicine, and concerns that isolation would exacerbate existing mental health conditions(World Health Organization, 2020).

As the older adult are at higher risk of serious illness if infected and account for 80 percent of all COVID-related deaths(Liu, Chen, Lin, & Han, 2020). Current public health guidelines recommend older adults limit in-person social interactions as much as possible(Kementrian KesehatanRI, 2020). This situation may impact their mental health during this pandemic.

Method

This study is descriptive analytic study using a cross sectional approach, intended to find the mental health impact due to the Pandemic of Covid 19. Population of this study is older adult (age 60years or more) who living in West Java and Jakarta. Using convenience sampling we distributed questionnaire to the older adult. We assessed sleep disturbance, loss of appetite and

psychosomatic symptom as the part of mental health issues that becoming the outcome of this study. Sociodemographic characteristics, general anxiety disorder, and pandemic related behaviour are selected as independent variables. Univariate, bivariate analysis and logistic regression analysis is performed in this study.

Result

A total of 259 older adult participated in this study. The average age of study participant are 65.3 (± 6.8 SD range 60-107 years old), 74.9% are female, 33% of study participants are having college degree. The multivariate logistic regression model showed that sleep deprivation is associated with non-college education background (OR=2.28;95%CI; 1.23-4.61), anxiety (OR=7.09; 95%CI; 3.57-14.08) and the existence of chronic illness (OR=2.75; 95%CI; 1.44 - 5.26). Psychosomatic symptom was associated with anxiety (OR=5.27; 95%CI; 2.75 -10.11) and chronic illness (OR=2.80; 95%CI; 1.47 -5.32). None of the Covid-19 related fear are associated with sleep disorder, loss appetite and psychosomatic symptom.


Discussion

This study highlighted the vulnerability of older adult of having psychological issues related pandemic of covid-19 such as sleep disorder, losing appetite and psychosomatic syndrome. Older adults may be particularly at risk for negative psychological consequences during the pandemic(Bergman, Cohen-Fridel, Shrira, Bodner, & Palgi, 2020). Psychosocial approach is necessary to reduce the mental health issues focusing on anxiety management and assisting those with chronic diseases and those with low education.

Keyword : Older adult; Pandemic of Covid-19; Mental Health

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Table 1. Association between psychological symptoms and sociodemographic factors

Variables	Sleep Deprivation			Psychosomatic symptom			Loss appetite		
	No	Yes	P value	No	Yes	P value	No	Yes	P value
	n(%)	n(%)		n (%)	n (%)		n (%)	n (%)	
Gender									
female	146 (68.5)	67 (31.5)	1.000	150 (70.4)	63 (29.6)	1.000	159 (74.6)	54 (25.4)	0.998
male	28 (68.3)	13 (31.7)		29 (70.7)	12 (29.3)		30 (73.2)	11 (26.8)	
Ages									
≥70 years	40 (62.5)	24 (37.5)	0.298	40 (62.5)	24 (37.5)	0.145	45 (70.3)	19 (29.7)	0.482
<70 years	134 (70.5)	56 (29.5)		139 (73.2)	51 (26.8)		144 (75.8)	46 (24.2)	
Education background									
Collage degree	109 (65.3)	58 (34.7)	0.180	116 (69.5)	51 (30.5)	0.773	120 (71.9)	47 (28.1)	0.275
Non collage degree	64 (74.4)	22 (25.6)		62 (72.1)	24 (27.9)		68 (79.1)	18 (20.9)	
General anxiety category									
Non anxiety	147 (79.0)	39 (21.0)	<0.0001	149 (80.1)	37 (19.9)	<0.0001	160 (86.0)	26 (14.0)	<0.0001
With anxiety	27 (39.7)	41 (60.3)		30 (44.1)	38 (55.9)		29 (42.6)	39 (57.4)	
Have chronic illness									
No	90 (78.9)	24 (21.1)	0.002	93 (81.6)	21 (18.4)	0.001	97 (85.1)	17 (14.9)	0.001
Yes	84 (60.0)	56 (40.0)		86 (61.4)	54 (38.6)		92 (65.7)	48 (34.3)	

To what extent do you worried about COVID-19									
I am afraid of catching it									
No	19 (65.5)	10 (34.5)	0.876	17 (58.6)	12 (41.4)	0.204	20 (69.0)	9 (31.0)	0.626
Yes	155 (68.9)	70 (31.1)		162 (72.0)	63 (28.0)		169 (75.1)	56 (24.9)	
I worried about the number of cases									
No	94 (63.1)	55 (36.9)	0.038	99 (66.4)	50 (33.6)	0.124	108 (72.5)	41 (27.5)	0.489
Yes	80 (76.2)	25 (23.8)		80 (76.2)	25 (23.8)		81 (77.1)	24 (22.9)	
I am worried my family member will be caught									
No	108 (66.7)	54 (33.3)	0.486	111 (68.5)	51 (31.5)	0.446	115 (71.0)	47 (29.0)	0.131
Yes	66 (71.7)	26 (28.3)		68 (73.9)	24 (26.1)		74 (80.4)	18 (19.6)	
I am worried of unable to perform religious activities									
No	167 (69.3)	74 (30.7)	0.389	170 (70.5)	71 (29.5)	1.000	180 (74.7)	61 (25.3)	0.745
Yes	7 (53.8)	6 (46.2)		9 (69.2)	4 (30.8)		9 (69.2)	4 (30.8)	
I am worried of unable to united with my family									
No	160 (71.7)	63 (28.3)	0.005	160 (71.7)	63 (28.3)	0.324	171 (76.7)	52 (23.3)	0.045
Yes	14 (45.2)	17 (54.8)		19 (61.3)	12 (38.7)		18 (58.1)	13 (41.9)	

Table 2. Multivariate Logistic Regression

Variables	Sleep Deprivation		Psychosomatic symptom		Loss appetite	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Gender (female=ref)	1		1		1	
Male	1.20	(0.60 – 2.38)	1.53	(0.78 – 3.01)	1.05	(0.50 – 2.23)
Ages (≥ 70 years old, ref)	1		1		1	
<70 years old	1.50	(0.65 – 3.47)	1.21	(0.53 – 2.77)	1.31	(0.53 – 3.24)
Education background (college degree, ref)	1		1		1	
non college degree	2.28*	(1.13 – 4.61)	1.45	(0.75 – 2.80)	2.50*	(1.16 – 5.41)
General anxiety category (non anxiety, ref)	1		1		1	
With anxiety	7.09*	(3.57 – 14.08)	5.27*	(2.75 – 10.11)	10.41*	(5.01 – 21.63)
Having Chronic Illness (no, ref)	1		1		1	
Yes	2.75*	(1.44 – 5.26)	2.80*	(1.47 – 5.32)	3.60*	(1.72 – 7.55)
To what extent do you worried about covid-19						
I am afraid of catching it	0.95	(0.64 – 1.40)	1.20	(0.82 – 1.76)	0.71	(0.45 – 1.12)
I worried about the number of cases	0.51	(0.17 – 1.53)	0.69	(0.23 – 2.06)	0.34	(0.10 – 1.25)
I am worried my family member will be caught	0.99	(0.83 – 1.17)	1.00	(0.84 – 1.19)	0.86	(0.70 – 1.06)
I am worried of unable to perform religious activities	1.14	(0.76 – 1.71)	1.02	(0.67 – 1.56)	0.84	(0.53 – 1.35)
I am worried of unable to united with my family	1.60	(0.86 – 2.98)	1.18	(0.63 – 2.20)	1.04	(0.51 – 2.11)

*p value < 0.05

The Impact of COVID 19 Pandemic on Older People Living Conditions in Indonesia

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Universitas Indonesia Darojad N.Agung -
BKKBN Indonesia

Purpose: to analyze the impact of COVID-19 on older people's lives. They need to be protected because most vulnerable group and at high risk of death due to Covid-19. Therefore, it is very important to know the condition of the older people during the Covid-19 pandemic.

Background: The COVID-19 pandemic has led to a dramatic impact on human life worldwide

[1] and changing everybody's living, including older people [2, 3]. Therefore this is challenging to keep older people to stay healthy and secure in fulfilling their needs. It's also to support the Healthy Ageing Decade's goals.

Methods: Using email, WhatsApp we deliver our electronic survey by “snowball effect” based on older people groups, cadres of BKKBN programs in all provinces or other supporting community. We conducted this study from August to November 2020. The electronic questionnaire in Google Form consist of demographic, knowledge and perception of older people toward pandemic COVID 19, socio economic condition, and impact of COVID 19 pandemic. The result of analysis present descriptive and inferential. The unit analysis is a person aged 60 years and above.

Results: 2,300 people joined the study, consist of 63.3% female and 36.7% male. Most of the respondents living in rural areas (56.9 %), 57.4% age 60-69 years, and 49.7% still married. The education level of older people respondents are most primary school (68.6 %), living with three generations (29.3 %), can fulfill their needs (66.00%), and 82.5% still independent. Around 67% of respondents claimed they were healthy during the study conducted. But, in general, 96.00% of respondents claimed the impact of the COVID-19 pandemic on their life. One of them is that most of the respondents (53.4%) feel very worried about the news about Covid-19. Herewith other impacts are deteriorating economic condition (36.5%), decreased income (80.3%), decreased income at 50% and above (40.5%), lack of social relation (52%), lack of social support (13.5%), experiencing neglected (2.6%), often conflict with family members (22,3%) and decreasing in older persons group's activities.

Conclusion: The COVID-19 pandemic in Indonesia has severely affected older people in

terms of their life and health, social and economic situation. It's a challenge how to increase older person support to fulfill their rights, especially during the pandemic. Also need to increase family resilience to protect older persons from discrimination, abuse, neglect, and violence, therefore they safe and comfortable living in their families. And for the older person to live there also need to enhance family and community empowerment to create income-generating.

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The screenshot shows a presentation slide with the following content:

The impact of COVID 19 pandemic on older persons

- Most older persons (53.39%): feeling very anxious
- Impacted their life:
 - Deteriorating economic condition 36.5%
 - Their income 80.3%
 - Most of older persons (40.5%): decreased income >= 50%
 - Social relation 52%
 - Lack of social support 13.5%
 - Experiencing neglected 2.6%
 - Often conflict with family members 22,3%
 - Decreasing in older persons group's activities

Source: Lilis Heri Mis Cich and Darajat Agung (online research, 2020)

aging population/lilis_hmc

13

Profile of Covid 19 Patients Elderly at Makassar Labuang Baji Hospital, South Sulawesi


Ariantin Ulfah

Division of Tropical Infection, Department of Internal Medicine, Hasanuddin University Medical Faculty

Background: The number of cases of death of COVID-19 patients in Indonesia in the elderly is 48.3%. Data regarding the clinical profile of elderly inpatients with COVID-19 for South Sulawesi is not yet available, while the elderly are high-risk patients for exposure to COVID-19 during this pandemic who need more attention.

Methods: This descriptive study used data from elderly patients with COVID-19 who were hospitalized at the General Hospital Labuang Baji Makassar, South Sulawesi from March to September 2020. The data included clinical characteristics, symptoms, comorbidity, multimorbidity, ethnicity, neutrophil lymphocyte ratio (NLR), absolute lymphocyte count (ALC), chest radiograph and patient mortality outcome. **Results:** in the population of elderly patients (n = 96), the majority were aged between 60-69 years (61.8%), were male (51.5%), and who had a history of close contact with COVID-19 patients before (66.2%). The most common symptoms were fever (85.4%), cough and shortness of breath (63.5%) which are typical symptoms of COVID-19, while the most common chronic diseases were hypertension (48.5%), diabetes mellitus (26.5%), TB (7.4%), CHD (5.9%), malignancy (2.9%), and CKD (2.6%). Multimorbidity was found to be quite high in elderly patients, about 38%. The mortality rate for elderly patients hospitalized with COVID-19 in this study was 7.3%, and 57% of the deaths were male. NLR less than 6 (62.8%), NLR from 6-10 (16.3%), NLR more than 10 (20.9%). ALC less than 600 (9.3%), ALC from 600 to 1000 (9.3%), ALC above 1000 to 1500 (27.9%), ALC above 1500 (53.5%). The Makassar tribe (67.7%), the Bugis tribe (17.7%), the thorn (14.6%).

Conclusion: confirmed cases and cases of death in the elderly with COVID-19 are not much different between men and women. Hypertension is the highest comorbid, and the typical symptoms of COVID-19 were found in the majority of study patients. Patients who died had a low percentage, as well as high NLR and low ALC values. The Makassar tribe dominates elderly patients in this study. Immunosenescence is hypothesized to have an important role in the susceptibility of the elderly to infection and increased mortality, however environmental



and viral factors may be a factor in the low mortality in this study.

Key words: clinical profile, elderly, COVID-19, South Sulawesi, Indonesia.



The Burden of Caring for Elderly Family Members on Health Workers in COVID-19 Pandemic Era

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⁴Ikatan Profesional dan Ahli Demografi Indonesia

Abstract

Background:

During the COVID-19 pandemic, health workers face a heavier workload than usual. However, not a few of them still have elderly family members. Also, the elderly is a very at-risk population, especially during this pandemic.

Purpose:

The purpose of this study was to explore the obstacles faced by workers in the health sector in taking care of their elderly family members.

Methods:

This study is a qualitative design. We collected from 106 health workers who still have elderly members in the Indonesian urban area. Data were collected by using online questionnaires. Respondents were asked to describe about their obstacles in caring the elderly family members. We also identified the dementia and dependency level of elderly using 10 symptoms of dementia and Activity Daily Life (ADL) indicators.

Result:

The results showed that most health workers did not find it difficult to care for elderly family members. To facilitate supervision and care for the elderly, most health workers entrust the elderly with caregivers, relatives, and other family members. However, some health workers experience difficulties due to irregular working hours and locations where workers live who are not in the same house as the elderly. We also found that 30% of their elderly family members are having a dementia symptom. 80% of them is on mild to moderate level of dependency.

**Conclusion:**

This research can be a starting point help policy development for health workers who have elderly families during the pandemic, considering that not many similar studies have been published. Although the elderly has been already vaccinated, there are possibility of other variant of virus in the recent time.

Keywords: health worker, urban, elderly, burden, Indonesia

Welfare Conditions and Resilience of the Elderly During Covid-19 Pandemic

Eka Afrina, M.Kesos (Alumni Master Degree Social Welfare Department Universitas Indonesia) & Aqilatul Layyinah, S.Kesos (Alumni Bachelor Degree Social Welfare Department Universitas Indonesia)

Abstract:

The elderly is one of the groups affected by the pandemic Covid-19 in a multidimensional manner and have a higher vulnerability than other age groups in social, economic, and psychological aspects. Since the initial case was discovered, the virus has changed the community's lifestyle and resulted in the impact of a multidimensional crisis. This is evidenced by the highest number of positive case deaths for Covid-19 in older people, reaching almost 50 percent of the number of positive cases. Vulnerability in the elderly had occurred even before the Covid-19 pandemic occurred. The welfare condition of the elderly includes several aspects including health, economic, and social aspects. Half of the total elderly population in Indonesia experiences health complaints, majority of the elderly suffer from degenerative diseases such as hypertension and diabetes mellitus. These two diseases also contribute to the most positive cases of Covid-19 in Indonesia. Economically, the elderly in Indonesia do not have certainty about income either from work or pension security. Older people have difficulty gaining access to the labor market, this occurs because of the assumption that the elderly is no longer productive and cannot provide benefits for the work they do. In addition, based on data from BPS (Statistics Indonesia), 60 percent of the elderly live with their children and grandchildren and fall into the lowest 40 percent expenditure group. The social life of the elderly also experiences a distraction, especially the elderly who are still working in the informal sector and had to limit their movement. The elderly who has pensions also experience difficulties if they want to take pension funds due to limited mobility. The three basic conditions above have resulted in the elderly being increasingly vulnerable due to the Covid-19 pandemic.

The resilience possessed by the elderly is important because through strong resilience it is easier to achieve recovery of physical, cognitive, and mental health conditions during the Covid-19 pandemic. The comorbid conditions experienced by the elderly result in low resilience of the elderly. However, recovery of an individual needs more than one's resilience, which also requires strong resilience of communities, health care system resilience, economic

systems, or even the whole country. Moreover, the current Covid-19 handling policies and social protection programs have not been responsive in responding to the needs of the elderly during a pandemic. The government needs to pay attention to the accessibility of program distribution to the elderly, considering that the health and physical conditions of the elderly can become obstacles in accessing social assistance independently. Besides, the elderly experience limitations in financial literacy skills. Provision of special assistance and ease of distribution of aid are prerequisites. The government must also accelerate in adding value to program benefits and expanding the reach of special elderly programs that can reach all older people in Indonesia.

Keywords: *Elderly, Welfare, Resilience, Covid-19*

Challenges of Aging Health Care in Bangladesh during COVID-19 Pandemic

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Purpose:

This examination comprehends as to how UHC embraces the idea of 'health for all' as the *promotive, protective, therapeutic, rehabilitative, and relieving* well-being facilities and what their strategies to execute lessening existing difficulties and boundaries in regards to Universal Health Care (UHC) of Aging in the disadvantaged societies of developing countries like Bangladesh during COVID-19 pandemic.

Background:

The novel COVID-19 is impacting global health, where older adults are extremely vulnerable and more likely to suffer adverse health consequences. The number of senior citizens in Bangladesh is increasing compared to the past few years, living in poverty with habitually deprived socio-economic conditions and inadequate access to healthcare facilities. Although whole stage assemblies are at risk of being compressed into COVID-19, it is more addictive for older people due to their basic nature. Notwithstanding the danger of disease and passing, they are at more serious danger of mental wellbeing and suffering prosperity issues.

Methods:

In this exploration, a logical conceptual framework is developed using a qualitative approach that is descriptive in nature and explores literature by reviewing as well as detailed and recent reviews of published documents and reports on the subject from an Bangladesh perspective.

Results:

During COVID-19, aging people with mental issues might be at complex danger because of shared isolation. Over half of the old in Bangladesh experience the ill effects of some level of burdensome signs ((Rahman et al., J Affect Disord 2020; 264;157–62.) and the predominance

of depression is about 54%, ((Rahaman et al., Int J Emerging Trends Soc Sci 2019;5;57–64.) which expanded because of cultural isolation. Dementia is another basic illness in the older, which expands the danger of covid-19 in patients with dementia. In particular, it very well might be hard for individuals with dementia to recall security methodology for COVID-19, for example, wearing a cover, washing hands or performing social removing, which may expand the opportunity of contamination ((Wang et al., Lancet 2020; 395;1190–1.). Along these lines, the older may confront extraordinary challenges when looking for help from clinical foundations.

Conclusion:

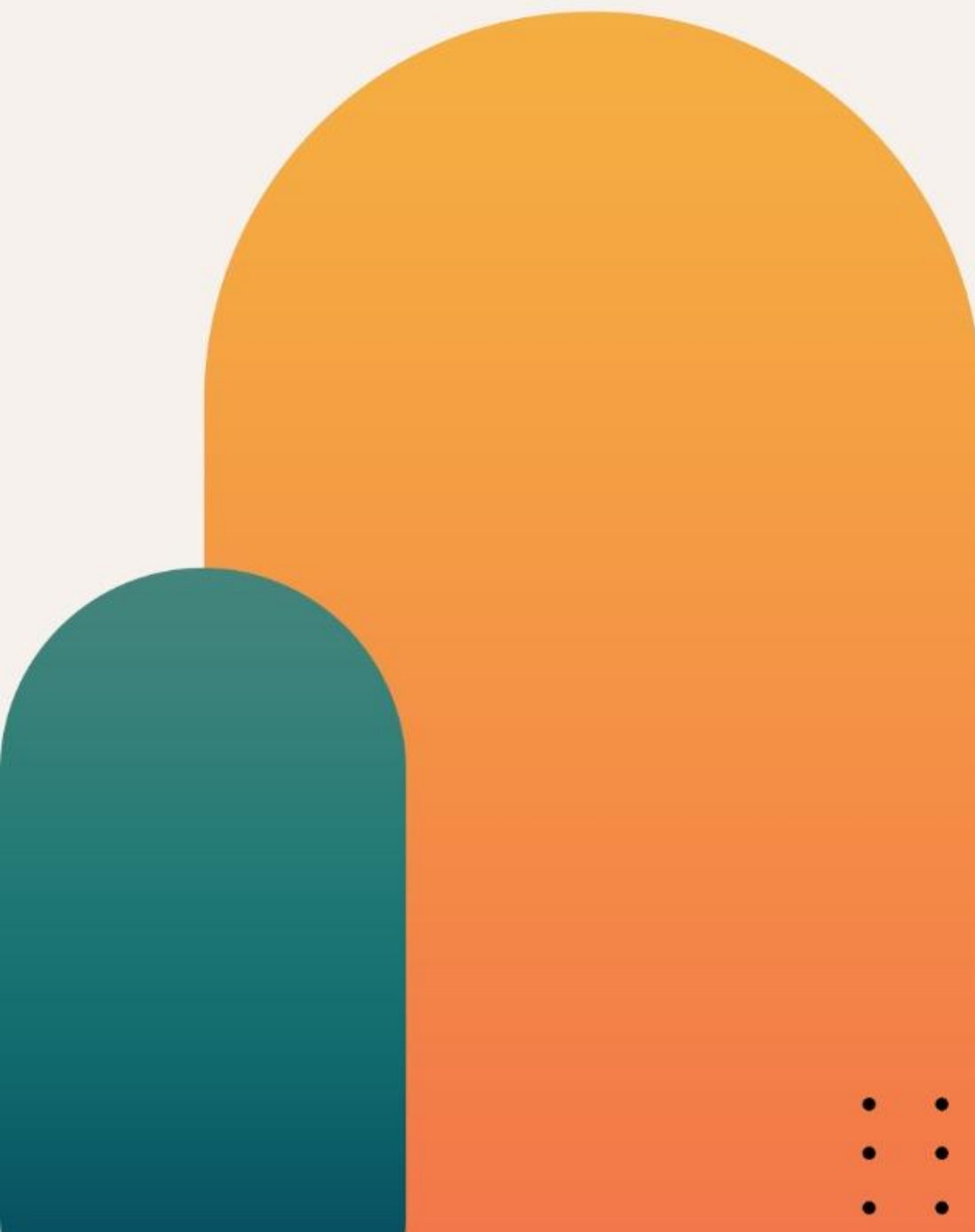
We endorse that a comprehensive collection of mediations ought to be embraced to reinforce social consideration and wellbeing framework strategies to guarantee the prosperity of the older in Bangladesh, advance preventive measures and encourage their admittance to clinical benefits. These multi-pronged estimates will require strategy level responsibility and participation from wellbeing, social consideration suppliers and offices to ensure the wellbeing and prosperity of this weak gathering during the COVID-19 pandemic. The discoveries have unique significant strategy consideration for suggestions to address the provincial variety of mindfulness about local area facilities for the policymaking to be received universally just as broadly preventive techniques.

Key Words: Aging Health, Care, COVID-19 Pandemic, and Challenges.



OP - E

PYSCHOSOCIAL ISSUES IN AGING



The Bidirectional Association between Physical Multimorbidity and Subclinical Depression in Chinese Older Adults

Bingqi Ye

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Purpose :

This study aimed to examine the bidirectional association between physical multimorbidity (the presence of 2 or more physical conditions) and subclinical depression (12 or higher score in Center for Epidemiologic Studies Short Depression Scale (CES-D-10) assessment) among a nationally representative sample of Chinese older adults.

Background :

Physical multimorbidity and subclinical depression become progressively more common among older adults. Both of physical multimorbidity and subclinical depression are leading diseases causing disease burden worldwide. However, little is known about the relationship between physical multimorbidity and subclinical depression among Chinese older adults.

Methods :

The data for this study was from China Health and Retirement Longitudinal Study. A total of 4605 Chinese elders with complete information on CESD-10, chronic conditions, and covariates at baseline were included for the present study. Among them, 3030 who were free from subclinical depression at baseline were included for the analysis of the association between physical multimorbidity and the onset of subclinical depression. Similarly, 2594 who were free from physical multimorbidity at baseline were selected to examine the association between subclinical depression and the development of physical multimorbidity. We utilized logistic regressions to estimate the prospective association between physical multimorbidity and subclinical depression. In both directions, we adjust basic demographic and major lifestyle factors.

Results :

In 4 years follow up, 34.06% had developed physical multimorbidity among elders who were free from baseline subclinical depression; 21.36% had developed subclinical depression among elders who were free from baseline physical multimorbidity. Physical multimorbidity was

strongly associated with the development of subclinical depression (adjusted odds ratio [OR] =2.05, 95% confidence intervals [CI]:1.71-2.46). Moreover, baseline subclinical depression was associated with a 1.84-fold increase in the odds of physical multimorbidity (adjusted OR=1.84, 95% CI: 1.50-2.46). The results were consistent across subgroups stratified by gender.

Conclusion :

Physical multimorbidity and subclinical depression were associated bidirectionally among Chinese older adults.

Biography Bingqi Ye is currently pursuing his medical degree in Preventive Medicine at the School of Public Health, Zhejiang University, China. His research interests include multimorbidity, menopause and high-throughput sequencing. From the second year of his medical study, Bingqi joined many research projects to acquire skills in data cleaning and biological experiments. Based on these projects and his own, he has published papers in different fields as coauthor or first author

Different Features Of Outpatients And Homebound Patients Evaluated In Primary Care

Velittin Selcuk Engin

Istanbul City Health Directorate

Abstract

Introduction :

Graying of the generation has shifted the paradigms of health globally. As well as being a blessing, increased longevity also poses challenges to health systems. Older adults use the health services 3 to 5 times more, according to the rest of the population. Promoting healthy lifestyles is beneficial to yield better health and lower burden of morbidity and disability at old age. Functionality is an important criterion for successful ageing. Certain factors increase the risks of becoming homebound or institutionalized. Determination of these risks is essential to develop effective strategies in primary care. This study aims to find out whether older outpatients have a discrete risk profile compared to their homebound counterparts and determine the discrete risks of becoming an older outpatient and homebound as well. Materials and method :

1209 Consecutive older patients that applied to Melek Hatun Family Health Center (MHFHC) in Istanbul either in person or through a relative between 01 January 2011 and 01 January 2010 who have agreed to take part in the study were enrolled. In addition to detailed history and physical examination, all patients were underwent Comprehensive Geriatric Assessment (CGA) that included Clock Drawing test (CD), Activities of Daily Living (ADL&IADL) , Mini Mental state Examination (MMSE), gait and balance scales of Tinetti's Performance Oriented Mobility Assessment (POMA Gait & Balance), Yesevage's 30 itemed Geriatric Depression Scale (GDS). Data were evaluated by SPSS version 22. Associations of categorical variables with homebound situation were evaluated using chi-square test, while mean values of continuous variables were compared between homebound groups and outpatients by Student's t-test. To investigate the independent risk factors for homebound situation, logistic regressions were performed using Backward Wald method. Variables that were associated with increased risk were added to the model along with confounding variables as age and sex. To avoid multicollinearity problems, variables that were strongly correlated (i.e. CD and MMSE scores,

gait and balance components of POMA) were not added to the model together. Statistical significance was assumed as p values lower than 0.05.

Results :

Mean age of the subjects was $73,57 \pm 7,4$ years (Fig1). Table 1 shows homebound subjects and outpatients by their gender. Table 2 displays continuous variables and their relation with homebound situation. In table 3, categorical variables that were associated with increased risk for outpatient or homebound situation have been shown. In logistic regressions, these variables were still present at the 22th and last step: Age, sleeping disorders, POMA balance score, GDS scores, anemia and neutrophil to lymphocyte ratio. However, the latter two variables failed to attain a significant level in this step (Table 4).

Conclusion :

While common chronic diseases of old age were significantly increased in outpatients along with obesity and major trauma history, many undesired conditions were significantly more frequent in homebound, especially those related to undernutrition, undertreatment, depression, dementia and terminal disease. Although failed to show itself as an independent risk factor, relation of neutrophil to lymphocyte ratio to homebound situation worth noticing as an inflammatory marker. As c reactive protein was failed to stay at the last step of the regressions, this ratio seems to be a better indicator of frail situation. As a result, these findings support the existing data reporting outpatients and home care patients have discrete clinical features at old age. They also suggest that there are different risks that lead older population to seek for medical service in an outpatient basis than those that render them homebound. In regressions, POMA and depression scores turned out to be independent risk indicators for homebound situation along with older age, a finding that proves their efficiency in CGA. Longitudinal studies at larger scales are needed to determine risk factors to require care and to establish proper casual relationships.

Intergenerational Support and Life Satisfaction of Older Parents in China

Zheng Fang

Singapore University of Social Sciences

Abstract

Using 6100 older parents aged 60 years or above from the 2016 wave of the China Family Panel Studies, this study attempts to understand how intergenerational support affects the life satisfaction of older parents in China. We find that on average, life satisfaction of parents increases when receiving support, either financial or instrumental, and decreases when giving financial support. However, this does not hold across the distribution of life satisfaction. Parents at the bottom of the life satisfaction distribution are found to be less positively affected by receiving support, but more negatively affected by giving financial support. Furthermore, the estimated effects are heterogeneous by gender, age, location, number of children, as well as by health status (i.e., the older parent has a functional disability). Considering emotional support, we find that frequent contact significantly improves parents' life satisfaction, a finding which is very robust across various sub-samples.

Association of relationship quality in caregiver-care recipient dyads with positive and negative aspects of caregiving among family caregivers of older Singaporeans

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Duke-NUS Medical School

Abstract

Purpose:

The aim of the study is to examine the association of the quality of the caregiver-care recipient relationship with the positive and negative aspects of caregiving among family caregivers of older persons in Singapore.

Background:

Providing care to older adults is a dyadic process that involves frequent interaction between family caregivers and their older care recipients. The quality of the caregiver-care recipient relationship can therefore affect the caregiving process and its outcomes. Current research shows that the quality of the relationship between care recipients and their caregivers is associated with caregivers' wellbeing and caregiving outcomes. For instance, relationship quality is found to be positively associated with caregiving benefits or positive caregiving role but negatively associated with caregiving burden.

Methods:

This study used data from the Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TraCE) study, a longitudinal dyadic study of Singaporeans aged 75 years or older receiving human assistance with their daily activities and their primary family caregivers. Dyads were being interviewed every 6 to 12 months, for a total of 4 interviews. Data collected from 278 caregiver-care recipient dyads during the first interview were used. The quality of the caregiver-care recipient relationship was assessed from the caregiver as well as the care recipient, separately, using a four-item scale from the University of Southern California Longitudinal Study of Three-Generation Families. Positive aspects of caregiving were measured with the shorter version of the Positive Aspects of Caregiving (S-PAC) scale and the positive subscale (caregiver esteem) of the modified version of the Caregiver Reaction Assessment (mCRA) scale. The negative aspects of caregiving were measured using the three

negative subscales (disturbed schedule and poor health; lack of finances; lack of family support) of the mCRA scale.

Results:

The quality of the caregiver-care recipient relationship, as reported by the caregiver, was positively associated with positive aspects of caregiving, when other caregiver and care recipient characteristics and caregiving contexts were concurrently considered. This relationship quality, when assessed from the care recipient’s perspective, was significantly associated only with the positive aspects of caregiving measured using the S-PAC scale. With regards to the negative aspects of caregiving, the caregiver-care recipient relationship quality, as reported by the caregiver, was negatively associated only with the lack of family support subscale, when other caregiver and care recipient characteristics and caregiving contexts were concurrently considered. This relationship quality, when assessed from the care recipient’s perspective, was not significantly associated with the lack of family support subscale.

Conclusion:

The findings suggest the significance of the quality of the caregiver-care recipient relationship to caregiving outcomes. Policy makers should consider caregiver-care recipient relationship quality in developing and/or implementing interventions to improve the family caregivers' caregiving experience.

Table: Multivariable linear regression with positive and negative aspects of caregiving



	Positive aspects of caregiving		Negative aspects of caregiving		
	S-PAC	mCRA (Caregiver esteem)	mCRA (Disturbed schedule and poor health)	mCRA (Lack of finances)	mCRA (Lack of family support)
	Regression coefficient (Standard Error)				
CG-reported quality of relationship between CR and CG	0.70 (0.11)***	0.081 (0.010)***	0.00099 (0.015)	-0.025 (0.019)	-0.036 (0.01)
N	266	274	272	272	275
R ²	0.31	0.42	0.38	0.32	0.33
CR-reported quality of relationship between CR and CG	0.52 (0.23)*	0.013 (0.020)	0.020 (0.026)	-0.023 (0.033)	-0.044 (0.02)
N	116	119	120	119	120
R ²	0.28	0.28	0.44	0.30	0.24

Significance levels: *p<0.05, **p<0.01, ***p<0.001

Abbreviations: S-PAC: shorter version of the Positive Aspects of Caregiving scale, mCRA: modified version of the Caregiver Reaction Assessment scale



The Association Between Fear-Avoidance Behaviour (Fab) And Depression In Geriatric Patients With Low Back Pain (Lbp)

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Background:

In recent years, the growth of the ageing population plays a significant role in the worldwide demographic trend where ageing is defined as a complex phenomenon involving deterioration at different biological level. It is expected that the prevalence of low back pain (LBP) will increase as it is a common musculoskeletal condition among the elderly population. One of the predisposing factors of depression development in individuals is physical impairment. Depression is one of the most common mental disorders due to the high prevalence in the population. Fear-avoidance behaviour (FAB) may act as one of the cognitive mediators on the development of depression in LBP individuals.

Purpose:

The objectives of this study were to estimate the prevalence of depressive symptoms in the geriatric population aged 55 to 65 years old with LBP and investigate the association between FAB and depressive symptoms in geriatric patients aged 55 to 65 years old with LBP while considering pain as one of the contributing factors to FAB.

Methodology:

An online survey was carried out using the Fear-Avoidance Belief Questionnaire (FABQ) and the Geriatric Depression Scale-15 (GDS-15) where 159 participants recruited from aged 55 to 65 years old among which 84 individuals with LBP were included for data analysis purposes. The outcome measures of this research study were based on the received responses. The age, gender and pain location of the participants were tabulated and expressed using Microsoft Excel as the descriptive statistic of this study. On the other hand, the inferential statistics data were analysed using the Chi-square test of independence through the usage of SPSS software. FAB was the independent variable of this study while depressive symptoms were the dependent variable.

Results:

Results of this study showed that 52.8% of the participants aged 55 to 65 years old reported low back pain. This study also showed 74.1% of the respondents aged 55 to 60 years old and 90.0% of the participants aged 60 to 65 years old have depressive symptoms. The findings of this study demonstrated a significant association ($p < 0.05$) between FAB and depression in geriatric patients with low back pain aged 55 to 65 years old.

Conclusion:

Ageing is an inevitable process that involves deterioration at various biological levels. Low back pain is one of the most common musculoskeletal issues among the elderly population. This study demonstrated that there is a high prevalence of depressive symptoms among the geriatric population aged 55 to 65 years old with LBP. The significant association between FAB and depressive symptoms in the geriatric patients considering pain as one of the contributing factors to FAB was also highlighted in this current study. The implications of this study allow chiropractic practitioners and other healthcare practitioners to acknowledge the role of fear-related behaviour such as FAB in the tendency of developing depression in the elderly population with LBP. Healthcare practitioners such as chiropractic student interns, chiropractic clinicians and chiropractors shall consider both physical and mental aspects during an assessment.

Keywords: FAB, Depression, Geriatric, LBP

The Association of Fear-Avoidance Behaviour (FAB) and Depression in Geriatric Patients with Low Back Pain (LBP)

Association between FAB and Depression in Geriatric Patients aged 55-65 years old

	FABQ		p-value
	Positive n (%)	Negative n (%)	
GDS			
Positive	41 (61.2)	26 (38.8)	0.005
Negative	4 (23.5)	13 (76.5)	

*95% Confidence Interval (CI), p-value<0.05

Association between FAB and Depression in Geriatric Patients aged 65 years old and above

	FABQ		p-value
	Positive n(%)	Negative n(%)	
GDS			
Positive	41(70.7)	17(29.3)	0.001
Negative	1(12.5)	7(87.5)	

*95% Confidence Interval (CI), p-value<0.05

Falls risk in older adults: A cross sectional study

Nalan Engin

Medinamic Health Ltd.

Abstract

Introduction :

Falls are among major health problems at old age, threatening the physical and psychological well-being of older adults and increasing the burden of health care systems. One in 3 community-dwelling older adults experience a fall at least once a year. Because of the complications that arises due to falls, risk reduction of falls have become a focal point in public health care agendas. Aim of this study is to investigate the risk of falls in an older population.

Materials and method :

A total of 1357 Older adults who have applied to İstanbul Metropolitan Municipality's health services between 01 January 2003 and 01 January 2010 either in person or through a relative consecutively and agreed to take part in the study were enrolled. In addition to detailed history and physical examination, all patients were underwent Comprehensive Geriatric Assessment (CGA) that included Clock Drawing test (CD), Activities of Daily Living (ADL&IADL) , Mini Mental state Examination (MMSE), gait and balance scales of Tinetti's Performance Oriented Mobility Assessment (POMA Gait & Balance), Yesavage's 30 itemed Geriatric Depression Scale (GDS). Data were evaluated by SPSS version 22. Associations of categorical variables with falls were evaluated using chi-square test, while mean values of continuous variables were compared between subjects with and without history of falls by Student's t-test. To investigate the independent risk factors for falls, logistic regressions were performed using Backward Wald method. Variables that were associated with increased risk were added to the model along with confounding variables as age and sex. To avoid multicollinearity problems, variables that were strongly correlated (i.e. CD and MMSE scores, gait and balance components of POMA) were not added to the model together. Statistical significance was assumed as p values lower than 0.05.

Results :

Mean age of the subjects was 71,74 (SD=7,09) years. While there were 929 outpatients (68,5%), 428 subjects (31,5%) were homebound. There were 821 females (60,5%) and 536 males (39,5%). Falls were found to be associated with many risk factors. Categorical variables that were associated with falls were shown in Table 1. Table 2 displays the mean values of

continuous variables that were significantly related to falls and their p values. After regressions, onset insomnia, POMA balance scores and GDS scores were found to be independent risk factors for falls (Table 3).

Conclusion

Our findings support the existing evidence that reporting increased risk for falls in older adults who have insomnia, mobility impairment and depressive symptoms. Preventive strategies must take these risk factors into account to alleviate the burden of falls in older population.

Mental Health among Filipino Older Persons

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ABSTRACT

Purpose

To (1) determine the prevalence of Filipino OPs with mental health conditions, (2) to determine the association of frailty with mental health conditions and (3) to describe the availability of mental health services for OPs in health facilities.

Background

Around 20% of older persons (OPs) are affected with mental health problems globally. The ratio of mental health workers per 100,000 of the Philippine is less than 1. Likewise, there is a lack of studies on prevalence of mental health problems in the country, their association with frailty, and the availability of geriatric mental health services.

Methods

The data was derived from the FITforFRAIL or “Focused Interventions for Frail Older Adults Research and Development Program” which is a project funded by the DOH-AHEAD through PCHRD. A total of 405 OPs from 4 Regions were assessed on their cognitive function using the Montreal Cognitive Assessment (MOCA) for Filipinos. Data derived from the Comprehensive Geriatric Assessment (CGA) included different self-reported and diagnosed mental health conditions. The data on mental health services for OPs were gathered from 27 regional hospitals identified by the Dept of Health (DOH) as future geriatric centers, and 17 regional health units (RHUs) in the country. Data was encoded using Epi-Info and analysed using STATA software. Frequencies, proportions, and association analyses were performed.

Results

Among the 405 participants, many OPs reported having symptoms of mental illness, while significantly less reported previous diagnosis. However, upon geriatrician examination, 19.8% suffered from depression, 7.7% had anxiety disorder, 0.5% had agitation and paranoia. For cognition, 56.3% were at risk for mild cognitive impairment, and 9.1% had dementia. Among the geriatrician-diagnosed mental health problems, only dementia was significantly higher among frail participants compared to pre-frail and robust ($p=0.002$). Out of the 27 DOH hospitals, there were only 46 psychologists and 160 certified geriatricians, most residing in Luzon. In RHUs surveyed nationwide, 6 of the 17 provided mental evaluation, while only 4 provided cognitive evaluation.

Conclusions

Expanded mental health services among older persons and mental health training of health workers are needed to ensure diagnosis, referral and management at the community level. Dementia services need to be widely provided.

Keywords: *Mental health, depression, dementia, older persons, mental health services, Filipino, Philippines*

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OP - F

OTHER ISSUES 1



Association between age and abdominal obesity in women of reproductive age: difference between urban and rural area in Indonesia

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Abstract

Purpose

To assess the association between age and abdominal obesity in women of reproductive age from urban and rural areas in Indonesia.

Background

Abdominal obesity is excess of body fat mainly localized in the central part of the body, instead of the midsection. It was associated with risk of type 2 diabetes, hypertension and cardiovascular diseases. Abdominal obesity in women of reproductive age was correlated with infertility problems or negative effect during pregnancy. Global and regional data showed the increasing of abdominal obesity in women. The last Basic Health Research (RISKESDAS) showed that the prevalence of abdominal obesity was higher in women (46.7%) than in men (15.7%).

Methods

In this cross-sectional study, we investigated 29888 Indonesian women of reproductive age (15-49 years old), referred to the RISKESDAS 2018. We analyzed with regression logistic model for finding OR in fourth quartiles of age.

Results

The prevalence of abdominal obesity in women of reproductive age was 50.6%, where more than half (55.1%) living in urban areas. Mean of waist circumference were 80.76±11.47 cm, 82.16±11.46 cm, and 79.52±11.34 cm (all areas, urban area and rural area; respectively). In both areas, the prevalence of abdominal obesity was higher at 36-49 years old (65.1% in urban and 53.7% in rural areas) than younger. We found a linier association between age and abdominal obesity in urban and rural areas ($p < 0,05$; $r = 0,155$; $r = 0,145$). Risk of abdominal obesity was increased with the increasing age, as OR (95% CI) for 17-25, 26-35, and 36-49 years old in urban areas were 1.19 (0.91-1.56); 1.94 (1.48-2.54); and 3.59 (2.72-4.75), respectively). Meanwhile, risk of abdominal obesity in rural areas were 0.94 (0.76-1.16); 1.37

(1.11-1.69); and 2.48 (1.99-3.08). Risk of abdominal obesity for age was more prominent in urban than rural areas.

Conclusion

Getting older especially for women of reproductive age in urban areas was associated with an elevated risk of abdominal obesity. It is suggested to keep weight and waist circumference lower than 80 cm, for reproductive health.

Keyword: abdominal obesity, women of reproductive age, urban area, rural area

Understanding the gaps and opportunities in addressing the needs of older Filipinos: a qualitative exploration of health and social workers' experiences in urban care settings

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Abstract

Purpose:

Delivery of a responsive, efficient, and quality care among geriatric care workers is necessary towards attainment of healthy aging. However, this requires identification and clear understanding of the specific challenges and potential solutions to address the complex needs of older adults. Hence, this study aimed to investigate the perceived gaps and opportunities in geriatric care service delivery among health and social care workers from various health care settings in selected urban areas in the Philippines.

Background:

Despite numerous government initiatives, concerns and disparities among older adults has continually been growing, but empirical studies focused on older Filipinos appear minimal and mostly regarding perceptions of aging. Information of how complex geriatric care issues are from varied network of human resources for health is also limited and essential to meet the needs of rapidly increasing aging Filipinos. An effective geriatric care strongly relies on functional service providers requiring their perspectives to be explored towards inclusive service delivery.

Methods:

A qualitative case study approach drawn on social constructivism theory inquired on working experiences, observed characteristics of older adults, geriatric services and needs, difficulties on health and social care delivery, and recommended solutions from 12 semi-structured in-depth interviews and 29 focus group discussions. Overall, 174 health and social workers engaged in geriatric care from purposively selected primary care units (i.e., health centers), hospitals (i.e., public- and private-owned), and nursing homes in two cities

participated in this study. All interviews were audio-recorded and transcribed verbatim. An inductive thematic analysis using NVivo 12® was employed to distinguish relevant codes and classify into themes.

Results:

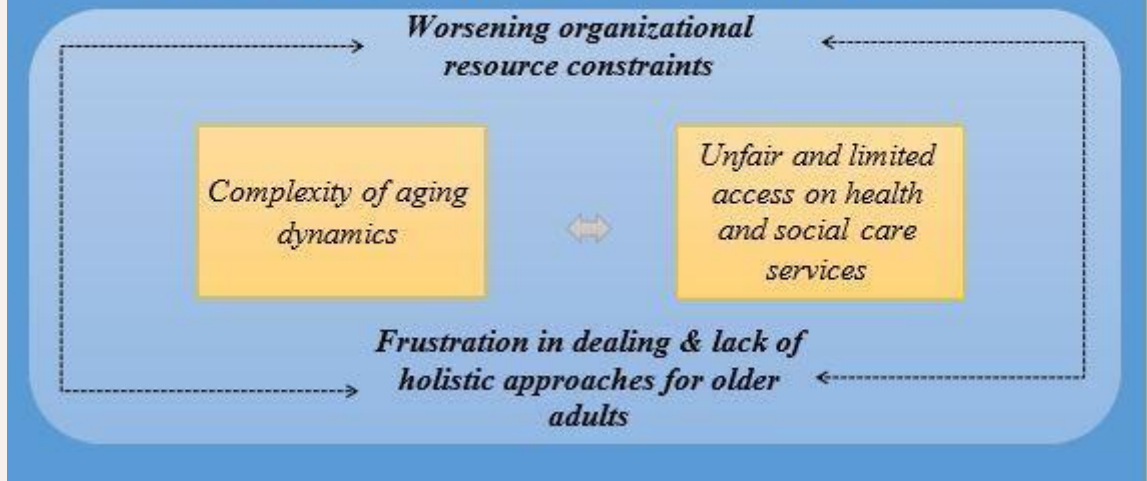
Interview participants perceived that a number of geriatric population within their area significantly experience increasing unmet needs due to limited comprehensive health and social care services, negatively exacerbating older adult's health outcomes and quality of life. The implementation of this key intervention was attributed to concurrence of related multiple challenges such as (1) older population intricacies: proliferating complex health characteristics, inequitable health and social care access among older adults; (2) care facility dilemma: prevailing behavioral frustrations in handling older adults, worsening resource hindrances in care service implementation, limited holistic care approaches; (3) and mainly, structural gaps: disjointed health and social care system. Several participants felt that strengthening implementation of collaboration towards an integrated geriatric care structure can be a potential opportunity to address the gaps including at both individual and institutional levels. However, a committed leadership was viewed to be the first step to effectively operationalize the strategy.

Conclusion:

Health and social workers asserted that challenges on geriatric care worsening the unmet needs of older adults from selected urban health care settings are determined by confluence of factors, largely of a divided geriatric care system. This warrants the need to institutionalize an integrated service delivery mechanism, anchored on dedicated leadership. Further examination on the impact of these challenges and solutions on service delivery and wellbeing of older adults is necessary. This study was carried through funding of World Health Organization – Centre for Health Development (WHO Kobe Centre: K18017).

Figure 1. Framework of identified perceived gaps and solutions in addressing the needs of older Filipinos

DISJOINTED HEALTH AND SOCIAL CARE SERVICES



INTEGRATION OF HEALTH AND SOCIAL CARE SERVICES

Committed leadership and governance

Developing Long Term Care (LTC) Training Program for Indonesian Elderly Caregiver

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Abstract

Background:

Health care services for older people should be conducted in a comprehensive and holistic manner, starting from families and communities (integrated health service delivery post for the elderly and home care and nursing care in institutional homes). To meet these requirements, it is necessary to develop effective and affordable strategies and programs for better long term care services to reach the quality of life of the elderly, which are integrated into general health programs for the elderly.

Objective:

To investigate the need of training program on long term care services for the elderly caregiver.

Methods:

This study is a cross-sectional study with of qualitative and quantitative approach. The research conducted in 4 provinces, in 12 nursing care in 6 cities; Jakarta, Bandung, Banten, Bekasi, Bogor and Yogyakarta, from October to December 2018. Questionnaire consist of sociodemographic characteristics such as age, gender, occupation, education attainment. The long-term care check list was used to identify the level of knowledge about long term care. Qualitative method was conducted in indepth interview to long term care facilities manager, and caregivers. Statistical analysis being used in this study are descriptive analysis, verbatim recorded was used for qualitative data analysis.

Result:

A total of 213 data collected from the caregivers. The average age of participants is 35.24 (+ 11.2 SD range 18 - 70 y.o) with the average length of work is 7.21 (+ 6.82 SD Range 1 - 37 years). 62.9% of the participants are female, and 46% of study participants were educated at the Senior High level. Seventy percent of the study participants are work as caregivers. The average knowledge about long term care was quite low accounted as 47.4%. According to the long-term care facilities manager, a specific training for long term care were rarely been conducted in long term care facilities. Caregiver usually learn about how to conduct care services for the elderly based on their nature of caring and partially learn from their seniors.

**Conclusion:**

This study indicated that most of the caregiver only especially for new caregivers did not understand what long-term care is, although they have partially performed. This condition is very dependent on the background of the nursing care and the social class of the institution. As conclusion there is a need to develop long term care training on refresh and increase their skill and ability to provide appropriate long term care of the elderly.

Keyword: long term care, training, caregiver, nursing care



Fear of falling in community-dwelling older adults and the associated risk factors

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Purpose:

This study intended to determine the factor associated to fear of falling among older adult in community dwelling

Background:

Falls are common problem among older people, it is estimated 424,000 fatal cases of falls occur every year (WHO, 2014), making fall as the one of the causes of death in the older adult due to accidental injury. More than 80% of fall related deaths in low- and middle-income countries, accounted for more than two-thirds of the highest deaths among adults over the age of 60 (WHO, 2014). The National Health Survey (2018) reported that the proportion of injuries caused by falls among the age group of 55 years or more is 25%, and 67% of falls occur in the home environment (Ministry of Health Republic Indonesia, 2018). Various effects of falls occur in the older adult including, post-fall anxiety syndrome and fear of falling, injury hospital treatment, disability (decreased mobility), decreased functional status and decreased independency and can even result in death.

The adverse effect of fall might significantly influence older adult mobility, hence fall experience will be a risk of decreased quality of life up to 70% (Yoshida, 2012). Falling can be a very traumatic and devastating experience that may resulting fear of falling. Older adult who fear of falling likely to reduced their activity and affecting subsequent losses in physical capabilities and even deteriorating their quality of life (Lavedán et al., 2018). Identification of the risk factor for fear of falling is beneficial for rehabilitation program for the older adult.

Method:

A cross sectional design selected to identify the factors contributed to fear of falling in community dwelling older adult. Population of this study ara the older adult in the Provinces

of West Java. Sample size accounted based on fall proportion found in previous study 25.5% (Pengpid, et.al 2018). One set of questionnaire consist of : Fear of falling identified as how the older adult worried about falling, and whether they use furniture or some other handle to hold on while moving, sociodemographic characteristics, history of falling in the last 12 month, Barthel Index were used to identify the functional capacity in performing activity daily living, self-reported of the existence of chronic illness, perceived hearing and vision impairment and physical capability performance and geriatric depression. Univariate and bivariate analysis Multiple logistic regression analysis selected to identify the association between each factor and the fear of falling.

Results

A total of 611 older adult were participated this study a total of 611 study older adult participated this study, 84.90% of them are aged less than 75 years old and 73% of them are female. The prevalence of fall is 19% of the older adult has history of falling in the last 12 month and 9.8% of them are fear of falling. This study find that fear of falling is associated with the history of fall OR = 2.88; 95%CI (Confidence Interval) (1.52 – 5.44), Depression OR=3.13 95%CI (1.43 – 6.84), Being mild or moderate dependent OR= 2.81; 95%CI (1.36 – 6.79) having poor physical performance OR=3.09 95%CI (1.41 -6.74), the existence of chronic illness OR=2.01; 95%CI (1.06 – 3.83), and having hearing impairment OR=1.97; 95% CI (1.01 – 3.86)

Conclusion:

This study highlights the importance of identifying fear of falling in community-dwelling older adult and addressing the factors contributing to it in rehabilitation of older adult. There is a need for interventional studies to prevent and limit the consequences of fear of falling in older adult persons.

This study is fully supported by the Doctoral Study Grant from The Ministry of Education, 2019-2021.

Keywords: Fear of falling, Older Person, Community dwelling, Risk factors

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Table.1

Sociodemographic Characteristics of Study Participants

Variables	Frequency n (%)
Fear of falling	
No	551 (90.2%)
Yes	60 (9.8%)
Fall history in last 12 month	
No	495 (81%)
Yes	116 (19%)
Ages	
<75 Years old	519 (84.90%)
>75 years old	92 (15.10%)
Gender	
Male	164 (26.80%)
Female	447 (73.20%)
Vision Impairment	
No	332 (54.3%)
Yes	279 (45.7%)
Hearing Impairment	
No	487 (79.7%)
Yes	124 (20.3%)
Having chronic illness	
No	160 (26.20%)
Yes	451 (73.80%)
The need of ADL support	
Independence	516 (85.30%)
Dependence	89 (14.70%)
Physical Performance	
Good	245 (40.10%)

Poor	366 (59.90%)
Depression	
No	547 (89.5%)
Yes	64 (10.5%)

ADL : Activity Daily Living

Table.2
Risk Factor of fear of falling

Variables	Fear of falling		Crude OR	Adjusted OR
	No n(%)	Yes n(%)	95%CI	95%CI
Ages				
<75 (ref)	471 (77.1%)	48 (7.9%)	1	1
>75	80 (13.1%)	12(2%)	1.47 (7.29 - 2.89)	1.21 (0.56 – 2.62)
Fall history in last 12 months				
No (ref)	461 (75.5%)	34 (5.6%)	1	1
Yes	90 (14.7%)	26 (4.3%)	3.92 (2.24 - 6.85)**	2.88 (1.52 – 5.44)
Gender				
Male (ref)	153 (25%)	11 (1.8%)	1	1
Female	398 (65.1%)	49 (8%)	1.71 (0.87-3.38)	1.73 (0.83 - 3.62)
Vision Impairment				
No (ref)	308(50.4%)	24(3.9%)	1	1
Yes	243(39.8)	36(5.9%)	1.90 (1.10-3.27)*	0.80 (0.42 – 1.53)
Hearing Impairment				
No (ref)	453(74.1%)	34 (5.6%)	1	1
Yes	98 (16%)	26 (4.3%)	3.54 (2.03-6.16)**	1.97 (1.01 – 3.86)
The needs of ADL support				
No (ref)	483 (79.8%)	33 (5.5%)	1	1
Yes	63 (10.4%)	26 (4.3%)	6.04 (3.39 - 10.76)**	2.81 (1.36 – 6.79)
Chronic Illness				
No (ref)	286 (47.1%)	19 (3.1%)	1	1
Yes	261(43%)	41 (6.8%)	2.37(1.34-4.17)**	2.01 (1.06 – 3.83)
Mobility Performance				
Good (ref)	235 (38.5%)	10 (1.6%)	1	1
Poor	316 (51.7%)	50 (8.2%)	3.72 (1.85 - 7.49)	3.09 (1.41 -6.74)
Depression				
No (ref)	509 (83.3%)	38 (6.2%)	1	1
Yes	42 (6.9%)	22 (3.6%)	7.07 (3.80-12.94)	3.13 (1.43 – 6.84)

Investigation On Psychological Impact Of Covid-19 Towards Healthcare Workers In General Hospital

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ABSTRACT

Purpose: The COVID-19 pandemic and Movement Control Order lockdown has taken the entire world and nation by surprise. It has affected almost all the industries however the most affected was healthcare industry since they are the frontliners to treat the infected patients. Unfortunately, healthcare workers facing the increase numbers of infected individual in which ironically increased the workload and hours.

Background: This event has taken the slope of psychological effect to a higher level among them. This investigation will explain its psychological impact such as depression, anxiety, stress, PTSD level of 200 healthcare workers in general hospital during the peak of the pandemic.

Method: In this research, data were collected by using DASS-21 and IES-R questionnaire during COVID-19 pandemic and movement control order and data were analyzed by using SEM-PLS. *Results:* Findings shows that adverse psychological among healthcare workers in general hospital during the COVID-19 pandemic. This research offered fundamental data for further psychological intervention.

Conclusion: This research discovered and revealed the amount of stress that healthcare workers are going through while treating the infected patients. Future full-scale study is very much needed in order to provide adequate clinical decisions that purported at addressing psychological impact of healthcare workers.

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Biography

Dr. Charles Ramendran SPR Subramaniam received both his Master of Human Resource Management and Bachelor of Social Work Management (Hons) from Universiti Utara Malaysia (UUM). He has obtained his PhD from Universiti Sains Malaysia (USM) in Human Resource Management. He has also obtained his Train the Trainer certificate awarded by Human Resource Development Fund (Ministry of Human Resource, Malaysia) and engaging in training people on conflict management, occupational safety and industrial relations & employment law.

Dr. Charles Ramendran currently engaged as an academician, holding the position of Assistant Professor in one of the prestigious private universities in Malaysia; Universiti Tunku Abdul Rahman (UTAR). UTAR is ranked top 100 in Times Higher Education Asia University Rankings 2018 & 2019 and ranked the second among the all the universities in Malaysia. In addition, his conference achievement was covered in Thanh Nien and Saigon Giai Phong Newspaper, Vietnam and my research award achievement published in ASIA SAMACHAR, an online newspaper. He was also invited to be the Chairperson of the organizing committee in which government authorities from the Ministry of Human Resources were guests. Furthermore, he has represented the academicians on improvising on National Employment Policy at ministry level. He was awarded best teaching performance by the President of the institution at numerous semesters. He has published in high indexed journals related to healthcare management.

Beyond that, I am an avid researcher in areas of Healthcare, Business Statistics, Strategic Human Resource Management, Organizational Behavior, Human Resource Information Systems, Organizational Development, Psychological Contract and Industrial Relations.

Work Environment And Management System And Its Impact On Employee Satisfaction Dr. Dr. Iskak Hospital Tulungagung

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ABSTRACT

Employee satisfaction is a prerequisite for increasing productivity, responsibility, quality, loyalty and service to customers.. This study aims to analyze the impact of the work environment and hospital management on employee satisfaction levels Dr. Iskak Tulungagung,. This research method is analytic observational using the Job Description Index (JDI) Aspect Assessment questionnaire.. The study population was all employees of Dr. Iskak for 1482 employees using the Slovim formula obtained a sample size of 800 Sampling technique proportional cluster random sampling . Data analysis using SEM The results showed that 80% of employee satisfaction stated that they were satisfied, 19% was sufficient and 1% was less. The variable component of employee satisfaction with the best positive response is related to the delegation system (98%) and the variable with the lowest level of satisfaction is welfare / salary (46%). For statistical results using SEM, the results show that the order of indicators that most influence employee satisfaction is job security, hospital administration, welfare, benefits, improvement, recognition, work environment, development, interpersonal relationships, leadership policies, team work, achievement, planning and delegation system. So it is necessary to monitor the quality of service with the Employee Performance Appraisal activity program starting from the evaluation of organizational planning, system procedure mechanisms, human resources, service facilities and infrastructure, as well as the achievement of productivity performance of service providers.

Keywords: job satisfaction, work environment, management system

Family Functions of Elderly Families in Indonesia: Rural-Urban Differences

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Abstract

Purpose: This study aimed to determine the differences in family functions' characteristics and practices in elderly families in rural and urban areas.

Background: The increasing number of elderly in Indonesia has not been accompanied by an increase in the quality of life of the elderly. Generally, the quality of life of the elderly declines due to changes in physical, psychological and social roles in society, which causes them to have many limitations, disabilities and weaknesses. Therefore, family and the environment where they live have an important role in providing support for improving the quality of life of the elderly. The practice of family functions can reflect the quality of life of the elderly in their families.

Methods: This research used a quantitative approach from the 2019 Program Accountability Performance Survey in the Family Module. Data analysis was carried out descriptively and inferentially through Cross-tabulation with the Chi-square and Independent T-Test from 12,391 elderly families spread across 34 provinces. The unit of analysis in this study was a family head aged 60 years and over in rural and urban areas.

Results: The number of elderly families in rural areas was slightly higher than in rural areas. Demographic characteristics such as family type, age group, sex, number of children, and education have almost the same pattern between elderly living in rural and urban areas. Interestingly, the elderly who are still working are more often found in rural areas than in urban areas. Likewise, elderly with low economic status are more often found in urban areas than in rural areas. However, the practice of the eight family functions in elderly families living in urban areas is slightly higher than in rural areas. Economic functions are a function that is widely practised in both villages and cities. Apart from the reproductive function, education's

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social function is a function that is not widely practised in elderly families. The results of the independent t-test showed a significant difference in the implementation of each family function (religious function t-count = 7,744 p <0.001, socio-cultural t-count = 6,522p <0.001, loving-kindness t-count = 12.005 p < 0.001, protection t-count = 6.189 p <0.001, reproduction t-count = 11.075 p <0.001, social education t-count = 7.637 p <0.001, economic t-count 7.956 p <0.001 and environmental t-count = 8.398 p <0.001) in elderly families in urban and rural areas. The implementation of 8 family functions also shows a significant difference in elderly families in urban and rural areas (t-count = 6,519 p <0.001).

Conclusion: Although there are not many differences in characteristics between elderly families in urban and rural areas, the family function is quite different in the two regions. Even though they are both low, the eight family functions in elderly families in urban areas are slightly better than in rural areas. This study recommends the need for strategies in optimizing the implementation of family functions in elderly families in rural areas, namely by socializing and strengthening family functions, mostly reproductive and social education functions, not only for their spouses but also for their children. Besides, it is necessary to encourage elderly families to be involved in family resilience programs such as “Bina Keluarga Lansia (BKL)” and “Posbindu” which aims to increase family knowledge about elderly care and assistance to improve the quality of life of the elderly to become tough elderly.

Keywords: *elderly families; family functions; family characteristics; rural; urban*



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OTHER ISSUES 2



Pharmaceutical Pictogram Validation Among Older Persons With Limited English Proficiency

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Abstract

Purpose:

This study assessed the validity of 52 International Pharmaceutical Federation (FIP) pharmaceutical pictograms, which depict medication instructions, among older Singaporeans with limited English proficiency (LEP).

Background:

Prescription medication labels (PMLs) are key to pharmaceutical care delivery. In Singapore PMLs are predominantly dispensed in English, but many older persons, aged 60 years or older, cannot read in English. This poses a language barrier for older persons to access medication information. The inclusion of pharmaceutical pictograms increases access to medication information, enhances medication literacy and optimizes pharmacotherapy outcomes, especially among low-literate older persons. However, pharmaceutical pictograms need to be contextually validated before use in a new setting or population.

Methods:

The study recruited 250 older Singaporeans (≥ 60 years) with LEP from five primary care polyclinics. Each participant was randomly assigned 11 pictograms. Taking reference from the ISO-9186 criteria for graphical symbol acceptability, ≥ 50 responses for each pictogram were

ensured. Pictogram validity was determined by the concepts of transparency and translucency. Transparency refers to the comprehension of a pictogram without any accompanying text, whereas translucency refers to the degree of representativeness perceived between a pictogram and its intended meaning. To evaluate transparency, first, comprehension for each pictogram was assessed by asking participants “*If you see this picture on a medicine label, what do you think it means?*”, without informing them of its intended meaning. If a response was given, participants were asked, “*How do you know?*”, and if not, “*Tell me everything you see in this picture*”. Then, to evaluate translucency, the participants were told the pictogram’s intended meaning, and asked to rate its representativeness (scale of 1 to 7). Finally, feedback to make the pictogram more representative and culturally-appropriate were gathered. Participant responses were audio-recorded, transcribed and translated before grading. Three study team members graded participants’ responses as – *correct, incorrect, or opposite* – in context of the intended meanings, the grading guided by the principles of semiotic theory. Pictogram validity was established based on a transparency criterion of 66% (i.e., pictogram was comprehended by 66% of participants) *and* translucency criterion of 85% (i.e., 85% of participants rated the pictogram ≥ 5 out of 7 for representativeness).

Results:

Participants’ mean age was 70.7 (± 6.1) years. Majority of the participants were female (62.4%), of Chinese ethnicity (72%), and had no formal education (48.8%). Fourteen pictograms (26.9%) achieved both the transparency and translucency criteria, thus were considered valid. A further 6 pictograms (11.5%) were considered partially valid as they only met the transparency criterion. Pictograms relating to frequency, dose and route were better understood compared to those depicting precautions, indication or side effects. On average, participants comprehended 5 pictograms correctly. Those younger, with better cognitive ability, with higher education, and with polypharmacy comprehended more pictograms.

Conclusion:

Majority (61.5%) of the assessed pictograms did not achieve validity highlighting the need for contextual validation of pictograms prior to use on PMLs. Variation in the extent of pictogram comprehension across older adult subgroups emphasizes the importance of facilitating understanding of such pictograms during medication counselling.

*PROMISE (Prescription Medication Label Improvement for Singaporean Elderly) study group (listed alphabetically, after the Principal Investigator):

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Covid 19 and lockdowns - use of the language of folk wisdom for survival - focus on elderly Sindhis in Sind, Pakistan

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Abstract

Language performs different roles, such as a tool of communication, identity development, and transmitting information. Researchers have studied the roles of languages in different contexts. In the wake of Covid 19 and the new normal many people used language to comfort and console each other against the backdrop of the ensuing lockdowns. While awaiting the Covid19 vaccine, language became an effective source of security for the pandemic affected world. Against this backdrop this research paper studies how the language of folk wisdom and religion helped elderly Sindhis in Pakistan's Sindh province to survive and be resilient during these lockdowns. Qualitative analysis of the purposively collected data from social media and from informal talks with senior Sindhis in Sindh was used to demonstrate how the respondents used faith-based language and folk wisdom to survive the lockdowns. Conversations with twenty senior citizens - 8 women and 12 men aged between 60 and 80 were analyzed using

Anvi's (2013) concepts of folklore and religious lore were used to discuss how humans use their language as a security tool as against a crisis.

Keywords: language security, elderly, Sindhis, Covid-19, lockdowns, Sind.

Frailty among older persons: Cases of robust, pre frail and frail Filipinos

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Abstract

Purpose: The objective was to describe the health status of older persons with focus on frailty and their interactions with the community as well as their environment.

Background: The Philippines is aging with approximately eight million of its population aged 60 years and over. While aging is inevitable, frailty is not. Addressing frailty through evidence-based interventions may lead to the improvement of functional ability and, thus, *Healthy Aging*.

Methods: Fried's frailty criteria determined the frailty status of survey participants. Only twenty-five older persons representing robust, pre frail and frail males and females from selected local government units in the four regions of the country were interviewed for the qualitative study. In-depth interviews describing the older persons' everyday lives were analyzed with the results of the Comprehensive Geriatric Assessment, Montreal Cognitive Assessment, World Health Organization Quality of Life, Mini Nutritional Assessment as well as the physical and dental examinations. Narratives were prepared by the research assistants with guidance from the Study Leader with training in Medical Anthropology. Its biomedical section was prepared by a medical consultant.

Participant observation and secondary data were the bases of the community profiles which described the physical environment of the older persons.

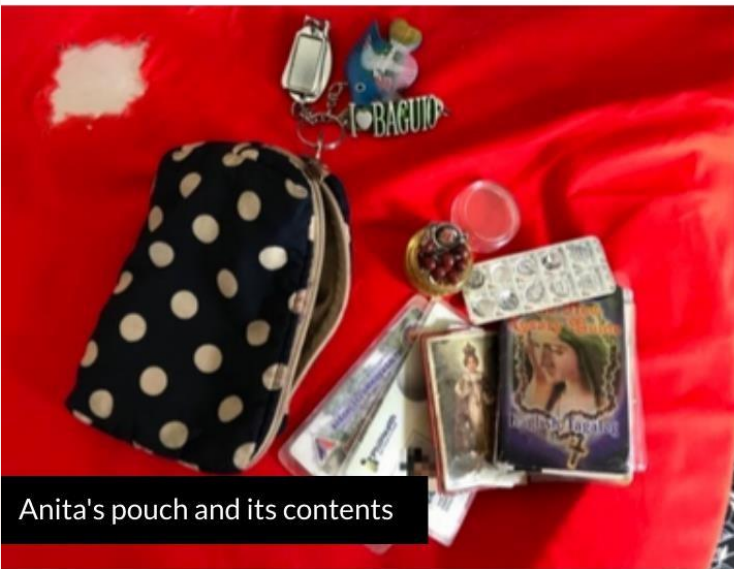
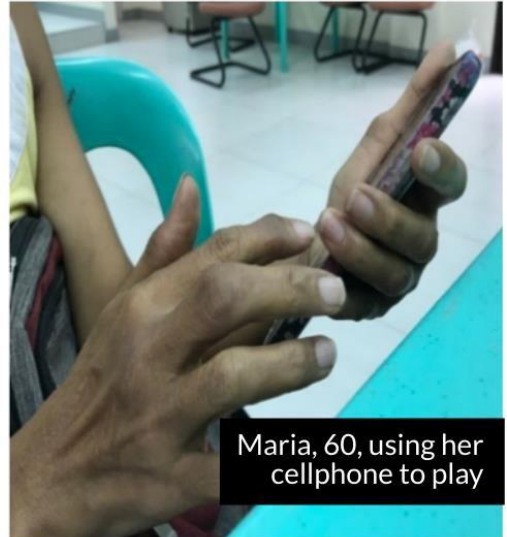
Results: In general, the older persons were still physically active. Regardless of frailty measures, they needed more financial assistance for their daily needs and maintenance medicines. They suffered from health, dental and psychological problems with history of fall. Self-rating of health and quality of life status was related with the quality of their family relationships rather than with their frailty category. Psycho-social support was provided by family and friends. They were generally a happy elderly population.

Conclusions: Government financial assistance as well as increase in pensions will alleviate the economic status of older persons. A point of contact in the community is needed to assist them with the holistic nature of geriatric needs. Coverage for geriatric services should be included in the PhilHealth benefits under the Universal Health Care. Social activities should be according to one's frailty status and economic capability. Lastly, social frailty among Filipinos should be studied.

Romar and Elena's room in their home



Maria, 60, using her cellphone to play



Anita's pouch and its contents



Irma frail at 70



Emilio's two grandchildren providing him joy

Preparation for Pre-Elderly in Entering Old Age

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Purpose:

This study aims to read and see the readiness of pre-elderly families in Indonesia in including the elderly from physical, economic and mental / spiritual aspects

Background:

As demographic transitions, fertility rates and life expectancy decline, changing and shifting the age structure of the population. According to BPS, elderly statistics in 2020 show that 9.9 percent of Indonesia's population is elderly, with the dependence ratio of the elderly to productive population increasing to 15.54 percent. However, along with the very rapid growth, there are more and more problems that arise in the elderly, ranging from physical, economic to psychological problems. BPS data (2019) shows the morbidity rate for the elderly is still 26.20 percent. Therefore, pralant preparation is needed to face old age in order to become tough, healthy, active, independent, productive and dignified elderly.

Metodologi:

This study is a research with a quantitative approach using secondary data from the 2019 Population, Family Planning and Family Development Program Accountability Performance Survey (SKAP) which is designed to produce estimates of provincial and national parameters. This study uses a family questionnaire module with the unit of analysis in this study is the head of the family both from a single family and a pre-elderly whole family (45-59 years) with a sample size of 25,378 respondents (weighted data). Processing and analysis in this study was carried out descriptively to see the relationship between pre-elderly characteristics (education, BPJS ownership, family type, economic status, number of children, working status) in preparation for old age seen from various aspects such as physical aspects (maintaining health. physical aspects, avoiding risky behavior), economic aspects (preparing economic capacity) and social aspects (socializing and maintaining mental / spiritual).

Results:

The results of the analysis show that pre-elderly families are predominantly male, have low education, live in urban areas, with working status, middle economic level, come from whole

families, do not have BPJS and have 0-2 children. The percentage of pre-elderly families who are exposed to the presence of the Poktan Elderly Family Development (BKL) and Prosperous Family Income Empowerment (UPPKS) groups is still very low at 37 percent and 19 percent, respectively. When viewed from the preparation for entering the elderly, 85 percent of pre-elderly families have maintained physical health and prepared economic capacity (67 percent). However, pre-elderly families who maintain mental / spiritual health are still less than 50 percent, avoid 39 percent of risky behavior and only 26 percent do social networking. Of the three aspects (physical, economic, social), the physical aspect is the highest aspect in preparing pre-elderly in preparing for the elderly (88%), while the social aspect is the aspect that is still low for pre-elderly families to prepare.

Conclusion:

The low level of pre-elderly families who prepare for mental and spiritual health can be seen from the low level of pre-elderly families who have heard or known about the BKL program. Some of the “Bina Keluarga Lansia (BKL)” programs that can support mental and spiritual health include regular health checks, outreach among elderly members, recitation and elderly associations. A study (BKKBN, 2015) found that almost all BKL poktan are generally integrated with other activities, especially with the elderly posyandu. Therefore it is necessary to have a good synergy between BKKBN and the Ministry of Health to improve the quality of life of the elderly through an integrated program between “Bina Keluarga Lansia (BKL)” and “Posbindu”.

Rehabilitation For Functional Disturbances on Geriatric Patient With Right Hemisphere Stroke And Acute Confusional State

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Abstract

Purpose : To elucidate the effect rehabilitation program for geriatric patient with right hemisphere stroke and acute confusional state.

Background: Delirium is an acute confusional state (ACS) that develops over a short period of time and fluctuates during the course of the day, occurs in 20%-40% of hospitalized elderly patients. It is a common complication in the acute phase of stroke, one of the common condition in our geriatric ward patient. Patients with post stroke delirium (PSD) had a relatively poor functional outcome, suggesting that more attention should be paid by physiatrist to help patients reach their optimal functional outcomes.

Patient (woman), 76 years old consulted with chief complaint loss of consciousness due to infarct stroke on right hemisphere. She has been conscious since hospitalization day 4, but felt sleepy all day long, only response simple question with short words, had poor orientation and memory. The CAM score was 3, shows on ACS condition. From physical examination she had right hemiplegia, cannot maintain head and trunk erect without any support. All of her mobilization and activity daily living (ADL) is helped by caregiver. The patient discharged at hospitalization day 14 on ACS condition.

Methods : We gave reconditioning program with remediate visuospatial, naming, attention, recall, orientation (time, date, place), and sleep cycle. We also give flexibility exercise for the right extremity, positioning sitting upright with support, and suggest a wheelchair with removable arm and back rest to facilitate the transfer and mobilization. After the patient got discharged, we did follow up regularly at polyclinic and homevisit. We make a daily activity schedule similar with her previous habit and caregiver schedule, including exercise program with physiotherapist and caregiver. This patient also consulted to psychologist, social worker, and nutritionist.

Result: After 1 week discharged she is recovered from ACS, but had severe cognition disturbance and hemispatial neglect. After 2 months she is on mild cognition impairment, can do basic ADL (grooming, eating) independently in sitting position with back support. There was no improvement of hemiplegia and hemispatial neglect, but she can maintain sitting without head support for 3 hours and without back support for 5 minutes. The quality of life assessment using Qo15 D and the caregiver burden assessment using The Zarit Burden Interview is getting improved.

Discussion: The ACS condition can get better even in geriatric patient. Intervention to promote cognition is the key for facilitating patient ability to learn functional task. We should concern about psychological condition and supporting system to remove barriers and improve the facilitator factors.

Conclusion: The good supporting system is needed to facilitate the comprehensive rehabilitation program. After 2 months intervention, the patient get better functional ability that improved her quality of life and the caregiver burden.

Intrinsic Capacity: Validation of a New WHO Concept for Healthy Ageing

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Background: The World Health Organisation has proposed a model of healthy ageing built around the concept of function, comprising an individual's intrinsic capacity, the physical and social environment they occupy, and interactions between the two. These constructs have hitherto been poorly defined.

Purpose: This study examined the structure and prognostic value of intrinsic capacity in a Chinese population aged 60 years and over.

Methods: Nationally representative, de-identified data were accessed on 3,304 consenting participants from the China Health and Retirement Longitudinal Study (CHARLS) 2011 and 2013. Data included self-report, clinical assessment and blood biomarkers. Incrementally related structural equation modelling was applied, including exploratory and confirmatory factor analysis, and path analysis. Multiple linear regression tested construct validity and simple and serial mediation models assessed predictive validity.

Results: Factor loadings for the models showed a clear structure for intrinsic capacity; one general factor with five subfactors: locomotor, cognitive, psychological and sensory capacities, and vitality/reserves. Intrinsic capacity predicted subsequent loss of both instrumental activities of daily living (direct effect ($p=-0.35$) and activities of daily living ($p=-0.197$), after accounting for increasing age, female sex, lower levels of education, lower wealth and number of chronic diseases. Each of these characteristics were associated with lower intrinsic capacity, providing strong construct validity.

Conclusion: Intrinsic capacity provides predictive information on an individual's subsequent functioning and care dependence beyond that afforded by age, other personal factors and multimorbidity, and thus useful in clinical assessment and as a research outcome.

Keywords: healthy ageing, intrinsic capacity, validation, ADLs and IADLs, China

Acknowledgement: We acknowledge the financial support from the Health@Business at the University of New South Wales.

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The Caring Burden and Needs of Older Carers in China

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Abstract

Purpose:

This research study aims to examine the caring needs of older carers and propose policies and practices to tackle their problems.

Background:

More older people need to take care of family members with chronic illness and disabilities. However, we know little about the conditions and needs of older carers in mainland China. As a result, there is no specific policies and services to address their needs. This study aims to fill this gap.

Methods:

This study adopted a qualitative research method by interviewing 40 older carers in Jiangmen City. The interviews were transcribed, and content analysis was adopted to identify the main themes of the data.

Results:

Four main themes were identified. Firstly, many older people found it hard to take care of their loved ones because they themselves suffered various types of illness. Secondly, most of them were in financial difficulties as they had limited resources from retirement benefits and social security benefits. Thirdly, most of them had difficulties in paying for medical expenses. Fourthly, many older carers were worried about future care arrangements for their loved ones.

Conclusion:

The findings of the study suggest that the Chinese government needs to give additional medical and financial support for older carers. Also, workers of social service agencies need to offer psychological support for carers and discuss with them about future care arrangements for care recipients.

Author: Chak Kwan Chan

Chak Kwan Chan is currently a research professor and director of Asia-Pacific Institute of Ageing Studies of Hong Kong Lingnan University. His main research areas are carers, ageing in place and social policies in China and Hong Kong. His research work was published in social work and social policy journals such as British Journal of Social Work, Journal of Social Policy, Social Service Review, Social Policy and Administration, Critical Social Policy and International Social Work.

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Four Ideals of aging policies and their relationships explored through the Bibliometrics analysis

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ABSTRACT

The study explores the nature and features of four ideals in aging strategies, namely healthy aging, successful aging, productive aging, and active aging. These ideals have various policy paradigms in support of elderly care as conceptual assumptions and theoretical underpinnings to uphold diverse development directions for creating an elderly-friendly society. These ideals are adopted as the guidelines in many aging studies, however, the relationships among these ideals' modes have been rarely investigated. Accordingly, this study will utilize a method of Bibliometrics analysis to reveal their relationships and to illustrate their common features along with the diverse content of these modes. The method adopts the Cite Space software into the study that calculates the frequency of the keywords from the selected papers. This method utilizes the co-citation and pathfinder technique for content analysis and applied its analysis about the data to draw graphs of assortment with keywords.


With this research design, the study uses “successful aging”, “healthy aging”, “active aging”, and “productive aging” as the keywords to examine. From the Web of Science, we obtain more than 9700 published English articles on aging issues to establish the database for this analysis. The period of publication for these articles is dated from 2008 to 2020 and we use the combining research with these four sets of keywords. By catchphrases investigation, we get bits of proof about researchers' comprehension of the highlights of these aging modes. The presented data illustrate the favorite of researchers for successful aging and healthy aging in comparison to active aging and productive aging. Established on this factual basis, we take successful aging as the center of investigation for testing what's commonplaces, however, also the differences, among the ideal of successful aging, healthy aging, active aging, and productive aging. Since each of these ideals' modes has its particular logic and features, the application of this CiteSpace software method could be an effective tool for revealing the logic grounds.

To operate this research process, we also need to make a conceptual exploration of these four ideals as the theoretical basis for conducting this cross-mode comparison. The obstacles



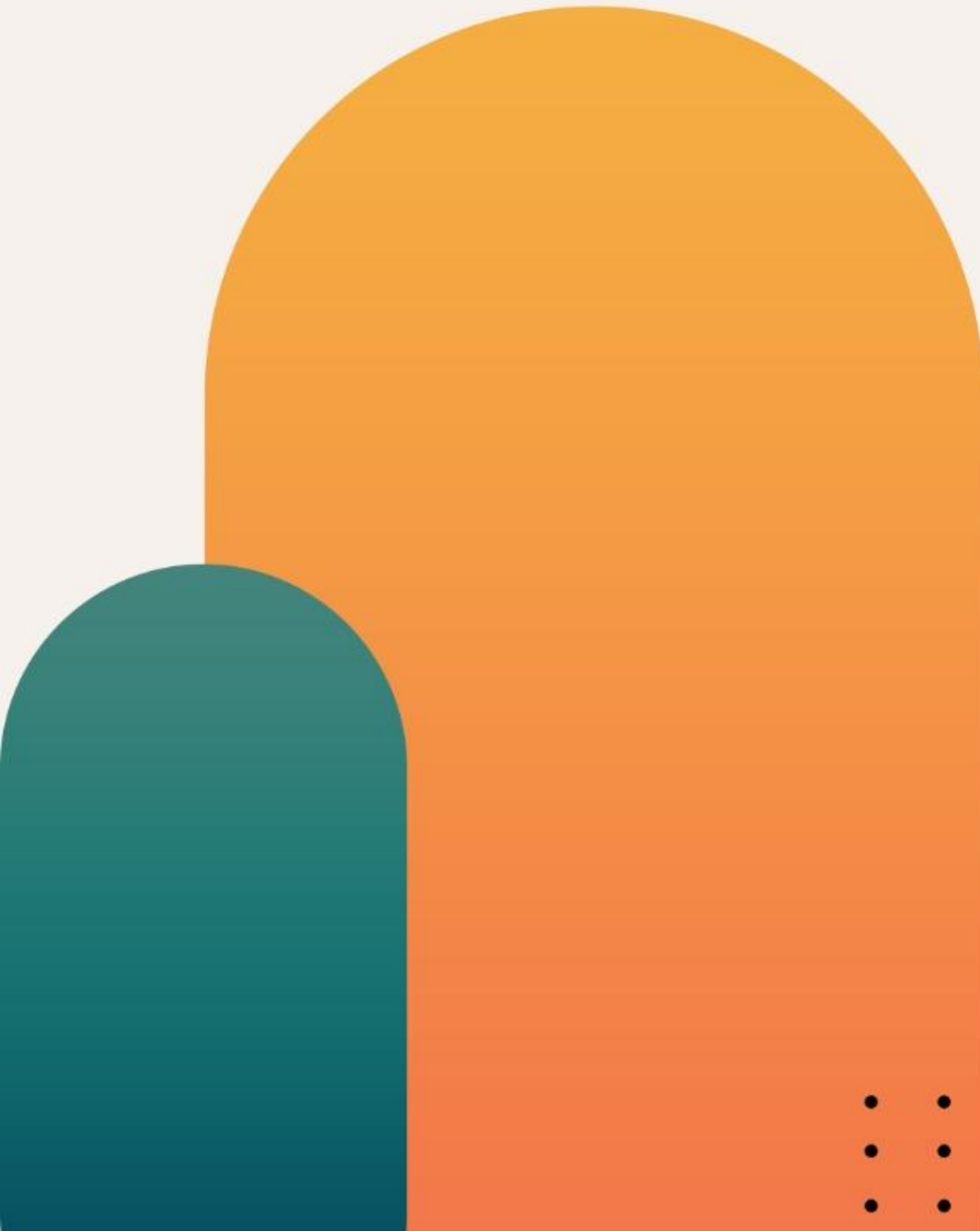
intended for developing comparative studies on these modes should be also referred to, and discussions along with the policy implications of this comparison should be also evaluated. The findings of this investigation are dissecting the connection among these four ideals and understanding their disparities. The study also has its intention to test the usefulness of Bibliometrics analysis as the new way of aging studies. This method could cover a wide scope of indicators including a comprehensive list of factors for the analysis (such as the level of happiness, social relations, social system, and other social norms.), and thus it renders us an effective way of conducive for a better understanding of aging with a comprehensive view on reality.

Keywords: Aging Ideals, Bibliometrics, co-citation analytical technique, aging policies





POSTER ABSTRACT



Food Availability Family a Driver Online Motor in the Pandemic COVID-19 in DKI Jakarta

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Background

The social distancing the effect on the driver online motor (Ojol) because not the transportation users Ojol as long as the period. So the driver Ojol income will be reduced and having impact on changes in food consumption patterns at the household level the driver Ojol

Aims of study

To find of food availability family driver online motor (Ojol) in the pandemic covid-19 in DKI Jakarta

Methods

This study using online by the application of WhatsApp on Ojol at random, of respondents living in Jakarta. The primary data will be gathered using a questionnaire online. Total respondents 97 with a design cross sectional study. Data analysis using a frequency distribution and the Chi Square.

Results

The availability of food during covid-19 highest, number 1-2 as many as times per day. Fear not having enough food 54,0 percent to be consuming food some right to want to eat because of the lack of income to get other food 50,0 percent to be consuming food less than needed because not enough food 47,0 percent receive food / food from others 64,0 percent. At the time was before Ramadan fasting often or not eating because there no food 46,0 percent having nothing distinctive deep dish daily food 44,0 percent. There is a significant relation exists between the increased availability of food family income levels driver Ojol.

Conclusion

The increased availability of food was family caused by income levels caused by physical distancing

Key words: Food availability family, the pandemic Covid-19, DKI Jakarta

Low Subcutaneous Fat As A Risk Factor For Sarcopenia Among Elderly Women In Bali, Indonesia: A Community-Based Age-Matched Case-Control Study

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ABSTRACT

PURPOSE This study aimed to determine the risk factor of sarcopenia, in particular, body composition factors among elderly women in Bali while adjusting to age.

BACKGROUND Sarcopenia, a progressive age-related disease characterized by the presence of low muscle strength and low quality or quantity of muscle, is a recognized cause of morbidities among the elderly. This disease has significant health and financial impact. Since sarcopenia is influenced by gender and age group, we aimed to examine risk factors of sarcopenia among elderly females in Bali after matching for each age group.

METHODS This study used stratified sampling in determining four villages in four districts in Bali as study locations. Then, the study was conducted by randomly selecting 39 elderly women with sarcopenia between August 1, 2016, and September 30, 2018. The European Working Group in Older People 2 (EWGSOP 2) 2018 criteria was adopted to diagnose cases (sarcopenia). Then, matched controls from those without sarcopenia were being randomly chosen to meet the ratio 1:1 with the case for each age group. The potential risk factors were then being analyzed using conditional logistic regression.

RESULTS Thirty-nine participants with sarcopenia and thirty-nine participants without sarcopenia were included in this study. In the univariate analysis, we found that underweight, the percentage of fat, subcutaneous fat in the arm and whole body, and lower whole-body subcutaneous fat have significant effects on sarcopenia. The multivariate conditional logistic regression analysis showed a significant increase in the risk of sarcopenia for participants with a lower percentage of whole-body subcutaneous tissue (odds ratio [OR]: 2.0, 95% confidence interval: 2.68-149.02) (Figure 1).

CONCLUSION Unlike other studies that support underweight status as a significant risk factor for sarcopenia, this study found that lower percentage of subcutaneous tissue as a

significant risk factor among elderly women after adjusting for age and gender. This finding supports the hypothesis that there is a cross-talk between skeletal muscle and adipose tissue. Redistribution of lipid from subcutaneous adipose tissue to visceral adipose tissue in menopausal women has caused an increase in pro-inflammatory adipokines, such as Leptin, IL-6, and TNF- α , and a decrease in anti-inflammatory mediators, such as Adiponectin and Vaspin. Adiponectin can regulate skeletal muscle through fatty acid oxidation, AMPK-stimulated GLUT4 translocation, and proteolysis inhibition to increase or maintain muscle fiber size with increased age. Therefore, a decrease in Adiponectin can promote Sarcopenia. On the other side, skeletal muscle can influence adipose tissue through its myokines. Resistance exercise training alone, or in combination with aerobic exercise training, can promote decreases in myostatin, and increases irisin serum concentrations. Myostatin promotes a reduction of muscle protein synthesis and glucose uptake and an increase in muscle atrophy. Irisin counteracts the effects of myostatin by facilitating the browning or 'beiging' of white adipose tissue and promote the increase of subcutaneous fat. Therefore, exercise can be used to counteract the effect on aging process on subcutaneous fat and to promote muscle protein synthesis.

KEYWORDS Sarcopenia, Subcutaneous Fat, Adipokines, Myokines, Females

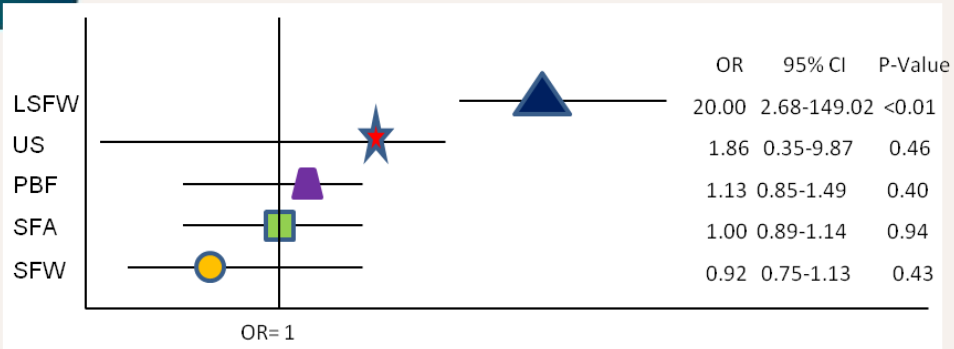


Figure 1 Multivariate Conditional Logistic Regression Analysis to estimate the risk of sarcopenia among elderly females

OR: Odd Ratio; 95% CI: 95% Confidence Interval; US: Underweight; SFA: Subcutaneous Fat in the Arms; SFW: Subcutaneous Fat in the Whole Body; LSFW: Low percentage of Subcutaneous Fat in the Whole Body; PBF: Percentage of Body Fat

3Ps (Perception, Personal Attributes and Practice) of Fitness Trainers in Engaging Older Adult to Exercise

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Abstract

Background

Exercise, as a form of physical activity, is essential to improving both physical health and emotional well-being for people of all ages (Penedo & Dahn, 2005). It is particularly beneficial to older adults and can help arrest their physical decline, prevent certain types of disease, and significantly improve their quality of life.

Bethancourt's group highlighted in their research, "Older adults do want their health care providers and health care systems to support their physical activity" (Bethancourt et al., 2013)

Purpose

Fitness trainers play a critical role in engaging older adults to exercise. However, the challenges they face, the interventions they adopted to overcome these challenges and their support in engaging and motivating older adults to exercise, are hardly mentioned in the literature. The study focuses on the perception, personal attributes, and practices of student fitness trainers, who are being prepared for the industry, in engaging older adults to exercise.

Methods

A qualitative methodological approach was adopted. The study was based on indepth interviews with ten student fitness trainers, who had worked with older adults in a 15-session exercise programme, with the objective of engaging older adults to exercise.

Results

A process was identified in engaging older adults to develop lifelong exercise habits. Provide social support to clear the initial barriers to exercise. After the older adults took the initial step to exercise, provide motivational support to reinforce the positive behaviour change to complete the exercise . For long-term exercise adherence, strong motivational support is needed.

Implications

All the ten student fitness trainers felt that they have a role in engaging older adults to exercise, as a teacher, catalyst, motivator, and in other respects. This had significant implications for

training existing and future fitness trainers if they are to work with health care professionals in engaging older adults to exercise.

Conclusion

Fitness trainers play an essential role in engaging older adults to exercise by providing necessary social support and motivation. The student fitness trainers were applying Carl Rogers' "person-centred approach" as they created an environment that is respectful and non-judgemental and showed empathy in listening to their clients. Such an environment is conducive to behaviour change (Coghlan, D., 1993).

With many certified fitness trainers registered in the industry, fitness trainers form a powerful resource who could work closely with health care professionals to engage and motivate older adults to exercise.

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Case Study of Solid Medical Waste Management at Hospital X Medan City during the COVID-19 Pandemic

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Abstract

Purpose: to find a mechanism for managing solid medical waste during the COVID-19 pandemic at X hospital in Medan City.

Background: hospital waste is confirmed as hazardous and toxic waste. During the COVID-19 pandemic, hospital waste increased 3-4 times from the amount before the pandemic, due to the use of personal protective equipment.

Methods: This type of qualitative research used a case study design to reveal the phenomenon of waste management during the COVID-19 pandemic. The study was conducted for 3 months, April - June 2020. The research informants consisted of 2 key informants, 2 cleaning services, 2 nurses, 1 person in charge of waste and 1 medical service committee. Data were collected by observation and interviews.

Results: The findings of the study were not carried out to separate sharps infectious waste from other medical medical wastes. There are no officers who record expired pharmaceutical waste (chemicals). B3 waste is stored in yellow plastic bags, no disinfection is carried out on the floor where the waste is collected. The transportation of waste to the maintenance unit is not routine twice a day, and there is no temporary storage area for B3 waste.

Conclusion: solid medical waste management is not in accordance with the standards of the minister of environment regulation No. 50 of 2015 in sorting and reducing, storing, transporting and processing It is necessary to establish a waste control team so that solid medical waste management provides protection and security for waste management officers, nurses, visitors and the community around the hospital.

Key words: medical waste, infectious waste, sharp waste, waste sorting

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Benefits of dividend demographic opportunities for the elderly in Indonesia

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Abstract

Background

Demographically, Indonesia is in a demographic transition phase which opens opportunities for a demographic bonus. Locally, only half of the regions from 34 provinces have a demographic bonus opportunity. whether the bonus results have an impact on the welfare of the elderly.

Purpose

To find out the description of the elderly in an area that has a demographic bonus.

Methods

This type of research is quantitative by design cross sectional and using secondary data from the 2018 National Social Economic Survey. the unit of analysis for the elderly population aged 60 years and over. Indonesia consists of 34 provinces. Determination of the demographic bonus opportunity using population projection publication data for 2015-2045 obtained an estimate of the population, the demographic bonus opportunity is measured by the age dependency ratio. If the ratio of 45 percent and below is considered the area has a demographic bonus, while above 45 percent is considered not to have had a demographic bonus opportunity. The observed variables consisted of residence, identity documents, intake of the elderly and other social activities..

Results

This study provides an illustration that the elderly who are in the demographic bonus area have better social, economic and welfare conditions and adequate clothing, food and shelter compared to areas that have not received the demographic bonus opportunity.

A Preliminary Study An Alternative Design Procedures for Early Detection of Thyroid Abnormalities Using Ultrasonography

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Background

The aging process is influenced by various factors, including genetic and environmental factors. All genetic factors have one common feature, known as the inflammatory process. Various types of stressors, can cause damage to physiological functions. The initiation of the aging process begins when there is a breakdown in the balance of DNA, protein and membranes structures, as well as the body's ability to inhibit the inflammatory process. The system changes are called epigenetic, that directly responsible for the developing diseases such as autoimmune thyroid disease, rheumatoid arthritis, type 2 diabetes mellitus, cardiovascular disease, and cancer.¹

The results of the IMS Health research in 2015 showed that Indonesia was in the position of the highest thyroid disorders' country in Southeast Asia, where as many as 17 million Indonesians had thyroid disorders. The amount of cases could be higher because there are still undiagnosed thyroid disorders. The risk factors etiology of this disease can vary, for example, autoimmune, viral infections, radiation, environmental sanitation, or an unhealthy life style. Thyroid disorders are the most endocrine disorders after diabetes mellitus. Thyroid dysfunction includes hypothyroidism and hyperthyroidism, which affect women 5-8 times more than men, and the rate is up to 2.5 percent in pregnant women.² Besides that, diet, iodine intake, and supposedly geographic location could influence the onset of thyroid disease. There is no data on thyroid disorders in Kalimantan due to its geographic location.

Early detection of thyroid disorders plays an important role in preventing the initiation of the aging process, and ultrasound examinations of the thyroid are easier to perform at a lower cost. Therefore, it is better to perform ultrasound on at-risk patients, before examining thyroid markers, considering that cost to spent for examining thyroid markers through the laboratory does not match the claims paid by the BPJS, so that the burden of the examination is borne by the hospital or by the patient.³

The purpose of this study as a preliminary study to provide initial data on the pathway for early detection of thyroid disorders through ultrasound examination of the thyroid compared with thyroid markers.

Method

The method was collecting retrospective data from the medical records of internal medicine outpatient clinic of Harapan Insani General Hospital, in patients who had thyroid ultrasound in all patients who met the inclusion criteria and collecting thyroid markers at the same time. The findings of normal and abnormal thyroid size were compared with abnormal thyroid markers obtained in the laboratory. Specificity and sensitivity tests were performed.

Results

The results of this preliminary study can be used as a basis for further research on the design of alternative procedures for early detection of thyroid disorders using ultrasound.

Keywords: aging, thyroid ultrasound, thyroid markers, preliminary research

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Ageing Management Model at Dayakan Village – Kulonprogo District, Yogyakarta Special Province

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Abstract

Introduction

Village community have not been fully knowledable and well inform of the resilient the value of aging community participation management. The knowledge limitation of the community participation management and the procurement of elderly community participation management, trained care giver, and some other facilities to be the reason for not dealing with the elderly management, rather than putting them on nursing home or even living alone. Elderly friendly and some potential elderly, and at the same time the increasing number of elderly population are not manage well. The objective of the research to develop a model for resilient and toughness of the elderly reason in the household.

Method

The method applied qualitative research.

Results

The results found an integrated model for the elderly, and household with elderly through community and family participation and potential elderly as well through intensife training, integrated elderly management with private sector and community based participation. Recommendation from the model: There are some factors can be adapt to support the success of the elderly management through local wisdom responsibility, creative and inovative activities, self adiminstered monitoring, supervision.

Keywords: elderly model management, integration, self-reliant, community participation.

Caregiving Elderly With Dementia: Positive Responses Experienced By Spouses

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ABSTRACT

Purpose: The purpose of this study was to determine the positive response experienced by spouses caregiving their partners with dementia.

Background: The role of the spouse as a caregiver for elderly with dementia is known to have significant effects than the role of other family members. Spouse's acceptance as caregivers for the elderly with dementia can affect the quality of services provided.

Methods: This research using a qualitative study with a phenomenological approach to 10 participants obtained using a purposive sampling technique.

Results: The results showed that the positive response of the caregivers while caring for a spouse with dementia was seen through feelings of gratitude for the blessings received, resilience to the conditions experienced, and the feeling of closeness as a partner.

Conclusion: Positive responses that appear in spouses who are caregivers can be an entry point for health workers to improve the welfare of spouses as caregivers.

Keywords: Dementia, Elderly, Caregiver, Positive Response

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Conquering Elder Care in a Rural West Sumatera Township of Desa Kampung Baru Padusunan: A Synergistic Alliance

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Abstract

Background. Currently, 212 elderly live in Desa Kampung Baru Padusunan, West Sumatera Province of Indonesia. Most family caregivers are women, usually wives, daughters, and daughters-in-law. However, women's future ability to provide care is threatened by falling birth-rates, increased employment, and the longer life expectancies of their aging relatives. Hence, the objective of this study is to examine points of tension that characterize culturally elder care services in a rural West Sumatera township, specifically Desa Kampung Baru Padusunan, within context of matrilineal social systems. **Methods.** This study used data from published documents, combined with qualitative study in which primary caregivers of elderly were adult children or children-in-law in Desa Kampung Baru Padusunan. In-dept interviews were carried out in December 2020. **Results.** Findings suggest that strongly committed intergenerational caregivers resist ceding their caregiver roles of older adults in the village. Current policy assumes the presence of nuclear families with female members readily available to provide elder care. Such policy flies in the face of current family trends, leading to unmet needs in community services for dependent elders. **Conclusion.** This study's findings suggest that formal elder care services are critically important to sustaining strong commitments to home care among intergenerational caregivers. Policy makers must address expansion of these elder-care services and appropriate compensation for the carers.

Keywords: age; older persons; gender; villlage.

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A figure related to the research

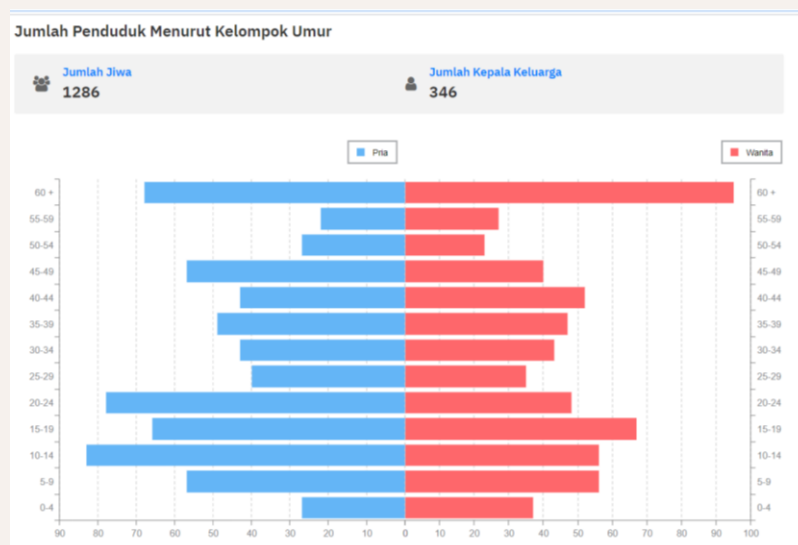


Figure 1. Population profile of Desa Kampung Baru Padusunan, 2020

A short biography of the presenting author

Ahmad Fasni is a family planning field worker who dedicated his work to help families, include elder persons in Desa Kampung Baru Padusunan, West Sumatera, Indonesia. His experiences in the grass root level have been published in some of local publications. His publications can be accessed through <https://scholar.google.com/citations?user=bN6FWIYAAAAJ&hl=en>

Description Of Quality Of Life In Pre-Elderly Workers (45-56 Years Old) With Metabolic Syndrome In Pt.X

Fierdania Yusvita

Quality of life can be determined by the individual's current perception of life, including their health condition. This study aims to describe the quality of life of pre-elderly workers (45-56 years) with the risk of metabolic syndrome (obesity, hypertension, hypercholesterolemia and hyperglycemia) at PT.X. This study was conducted with a qualitative descriptive method. Data were collected using the interview method and review of medical check-up documents. The results showed that the respondents perceived that their quality of life was good. Respondents considered that their current health was good physically. Respondents didn't know that their current health condition could lead to degenerative diseases in the future if their temporary behavior was neglected. Five of seven respondents didn't exercise regularly and three of seven respondents were active smokers with 3-20 cigarettes per day. All of respondents hadn't paid enough attention to their food intake. Psychologically, respondents perceived that their psychological condition was quite good, they perceived their work environment as a place that was comfortable enough to build social relationships. There needs to be an improvement in promotional programs related to metabolic syndrome at PT.X so that the workers' awareness of their health conditions will increase.

Keyword : quality of life, metabolic syndrome, pre-elderly

Ergonomic Design of Ablution Places' Increasing the Comfort of the Elderly (Case Study of Mosques in Indonesia)

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ABSTRACT

Objective: to obtain an ergonomic ablution design for the elderly based on anthropometry.

Background: the slouching position of the elderly when taking ablution water causes discomfort, back pain, and the risk of falling. Ergonomic design provides harmony between the limitations of the elderly and the design of the equipment so as to achieve comfort and free from injury.

Methods: qualitative research is used to determine the ergonomics design using a case study design of a mosque in Indonesia. Data obtained by interview and observation. Interviews were conducted with 2 elderly people who used the bathroom facilities for ablution. The supporting informant was 1 mosque nazir. Observations on the place of ablution include the floor, the height of the water tap, the floor and observations of the elderly when taking ablution. The data validity was done by triangulating the results of interviews and observations.

Result: the bent posture causes discomfort, there is no wall grip on the place of ablution, there is no seat and footrest. The height of the water tap is 83 cm, anthropometric height of the elderly is 145 cm, distance from leg to waist height is 87 cm, length reaches 58 cm.

Conclusion: Wudu facilities have not been designed ergonomically and specifically for the elderly, the ease of worship facilities for the elderly contributes to the prevention of injury, illness and improving the quality of life of the elderly. It is hoped that the findings of this study will become a guideline for preparing the design of ablution places in mosques, thereby increasing the comfort and convenience of the elderly.

Key words: place of ablution, elderly, comfort, ergonomic design

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Knowledge, Attitude and Practices of Caregivers towards Covid-19 and its role in caring of elderly during outbreaks: a quick online survey in 4 cities in Indonesia

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Abstract

Background: The elderly and their caregivers are at higher risk from Coronavirus Disease-2019 particularly for elderly with chronic health conditions. To prevent the transmission of the virus, those elderly issued strict physical distance, restricting most interactions between the elderly and their caregivers. On the other side, caregivers can serve as crucial and trusted partners in the elderly's care to curb the spread of the COVID-19 virus.

Purpose: To analyze the knowledge, attitudes, practices (KAP), and the role of caregivers in providing services to the elderly during the outbreaks.

Method: A descriptive quantitative study was conducted from May-June, 2020. The survey was utilizing Google Forms in four cities in Indonesia.

Result and discussion: A total of 317 out of 400 participants had completed the survey. The knowledge of the COVID-19 score was 79.50%, attitude 92.11%, and practice 90.54%. The role of caregivers to prevent the elderly from COVID's infection was about 98.42%, encourage to continue their routine activities during physical distancing 84.54%, treated elderly by not going to the hospital (60.04%), not visited any crowded place, wore masks, and washed their hand after activity (87.38%), agreed that the government will finally successfully control COVID-19 (90.22%).

Conclusion: It can be concluded that the knowledge, attitude, practice and role of caregivers on COVID-19 effectively prevents the caregivers neglecting the elderly during the COVID-19 outbreak. Future information on elderly care need to consider not just the risks of the virus, but also the healthy lifestyle.

Keywords: Covid-19; Knowledge, Attitudes, Practice; Role, Caregivers, Elderly, Indonesia

Menopausal Symptoms In Menopause Women

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Abstract

Objectives : This study aims to describe the menopausal symptoms experienced by menopause women.

Background : Every woman will experience menopause. Menopause occurs naturally. Women who experience menopause will get menopausal symptoms, where based on the Menopause Rating Scale there are 11 menopause symptoms, namely 1. Hot flashes, sweating (episodes of sweating) 2. Heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness) 3. Sleep problems (difficulty in falling asleep, difficulty in sleeping through the night, waking up early) 4. Depressive mood (feeling down, sad, on the verge of tears, lack of drive, mood swings) 5. Irritability (feeling nervous, inner tension, feeling aggressive) 6. Anxiety (inner restlessness, feeling panicky) 7. Physical and mental exhaustion (general decrease in performance, impaired memory, decrease in concentration, forgetfulness) 8. Sexual problems (change in sexual desire, in sexual activity and satisfaction) 9. Bladder problems (difficulty in urinating, increased need to urinate, bladder incontinence) 10. Dryness of vagina (sensation of dryness or burning in the vagina, difficulty with sexual intercourse) 11. Joint and muscular discomfort (pain in the joints, rheumatoid complaints)

Methods : This study only describes menopausal symptoms experienced by menopausal women using the Menopause Rating Scale questionnaire. The sample of this research is the parents of students of the Faculty of Public Health, State Islamic University of North Sumatra who are willing to fill out an online questionnaire, as many as 40 people.

Results : The average age of the sample in this study was 40 - 50 years with the most recent education being high school and the majority of the occupations were housewives, but some were still actively working. The highest marital status is married with 3 to 4 living children and only 1 person is still actively smoking. All symptoms experienced by respondents with mild levels. Symptoms with severe levels are in sleep problems and depressive mood. Meanwhile the choice of very severe symptoms is joint and muscular discomfort (pain in the joints, rheumatoid complaints).

Conclusion : All menopausal symptoms are experienced on average in mild levels. However, on the symptoms of discomfort in the joints and muscles (joint pain and complaints of

rheumatism), there were 4 respondents who felt the symptoms were very severe. This study is in line with research conducted in Saudi Arabia (AlDughaiter, 2015) where the symptoms reported to be most prevalent were joint and muscle pain (80.7%).

Keywords : Menopause, Menopausal Symptoms, Menopause Rating Scale

Risk Factors for Non-Communicable Diseases in Productive Age in Kampar District, Riau Province

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¹

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Introduction: Indonesia is predicted to experience an increase in the productive age population (1564 years) reaching 64% of the total population in 2030 - 2040. This human resource asset must be followed by improving the quality of education and health. The increasing trend of noncommunicable diseases (NCDs) in society could be a threat in the future. According to WHO in 2018, NCDs cause around 41 million deaths each year or the equivalent of 71% of all deaths in the world. Based on Riskesdas/Basic Health Research 2018, the prevalence of diabetes in Kampar district is 1.59% and hypertension based on measurement results is 29.83% (higher than the prevalence of hypertension in Riau province). The impact of uncontrolled non-communicable diseases will cause premature death and the inability to live independently. The purpose of this study was to describe the behavioural NCDs Risk Factor in the productive age group (15 - 64 years) in Kampar district, Riau Province.

Methods: This research was a quantitative study with a cross sectional study design. A total of 524 respondents from 200 households aged 15 - 65 years were interviewed about history of diabetes, hypertension, heart disease, asthma and COPD and lifestyle that can increase the risk of NCDs. All data were collected from May to August 2018

Results: The results showed the prevalence of diabetes was 2.5% (95% CI 1.2 - 3.8), hypertension 8.8% (95% CI 6.4 - 11.2), cardiovascular diseases 0.4% (95% CI 0.1 - 0.9) and asthma and COPD 1.1% (95% CI 0.2 - 1.99). The youngest age was 20 years with a history of asthma. Behavioral risk factors were 25.8% of respondents who smoked, 19.5% of respondents did not breakfast every day, consumption of sweet foods and drinks every day was 41.2% and 34% respectively, consumption of fatty foods every day was quite high 56,9%, the consumption of enough vegetables and fruit every day is still low, 29% and 7.4% respectively. The percentage of respondents who exercise was also low, 7.3%. The results of the bivariate analysis using mann whitney test showed no difference in age on risk factors for consumption of fatty foods, vegetables and fruit. With the exception of the daily breakfast habit, the mean age of the respondents was higher significantly in the risk group (smoking, consumption of sweet foods and drinks and lack of exercise).

Conclusion: The highest prevalence of non-communicable diseases in the productive age group was hypertension. More than half of the respondents of productive age have a lifestyle that can increase the risk of PTM including high consumption of fatty foods, lack of consumption of vegetables and fruit and lack of exercise. NCDs prevention health promotion strategies can be emphasized on risk factors based on the target age group.

Keyword : Non-communicable diseases, Productive Age, Behavioral Risk Factor, Kampar

The Effect of Back Massage Therapy on Decreasing Pain Intensity in the Elderly with Rheumatic / Osteoarthritis at the Elderly Posyandu in Patam Lestari Village, the Work Area of the Sekupang Health Center in Batam City 2019

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Abstract

Background :

Rheumatism / osteoarthritis is a musculoskeletal disease that often occurs in elderly people. Rheumatic disease / osteoarthritis causes pain that will disturb the comfort of the elderly. The purpose of this study was to see the effect of back massage therapy on reducing pain intensity in elderly with rheumatism / osteoarthritis in elderly Posyandu, Patam Lestari Village, the working area of Sekupang Public Health Center, Batam City.

Method

This research was an analytical research with a true experimental design with a pretest-posttest control group design. The population was 59 elderly, with sample of 30 elderly that selected by simple random probability sampling. The data obtained from this study were the values of pre and post therapy between the control group and the treatment group. the data was analyzed by wilcoxon test.

Result and discussion

The results of this study indicate that there is an effect between back massage therapy on reducing the intensity of rheumatism / osteoarthritis pain in the elderly at the Patam Lestari Posyandu with Z score = -3.162 and p-value = 0.002. Back massage therapy is a non-pharmacological treatment without side effects that can be used by families and the community health center as a reduction in pain intensity because psychologically it creates enjoyment of touch, caress and attention by other people, which the elderly can handle the most. Reducing the intensity of pain in older people with osteoarthritis.

The Impact of COVID-19-Social Isolation on Mental Health and Wellbeing of Older Adults as Vulnerable Population: A Narrative Review

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Abstract

Purpose. This review aims to characterize the potential impact of social isolation during the COVID-19 pandemic on the mental health and physical wellbeing of older adults.

Background. The ongoing COVID-19 pandemic tends to affect older adults more severely, thereby raising the need for social isolation in this age of the population. One concern is this behavioral change of social isolation such as physical distancing, limited movement, and stay-at-home orders is likely to impact older adults' social ties and quality of life, as well as risk for illness and health. At the same time, older adults also struggle with digital exclusion.

Methods. A narrative literature review of some studies published from January 1, 2020 to January 13, 2021. The literature search comprised an electronic search on different online databases in PubMed and ScienceDirect using the keywords *COVID-19* followed by generic terms *older adults* or *older people* or *aging population* or *elderly*. Excluding duplicates, a total of 376 articles were screened, of which 21 studies were included in the final review.

Results. Many older people could be mentally well-equipped to deal with social isolation, but some experience a negative impact on mental health. Stress, anxiety, and depression symptoms were reported during the self-isolation period. The physical activity among older adults has declined amid COVID-19. Some elderly who are not moving much may lose significant muscle strength, flexibility, and aerobic capacity.

Conclusion. Mental health and wellbeing in some older people are negatively affected during physical distancing for COVID-19, identifying an area for intervention if social isolation measures continue. Traditional practices programs must be rapidly altered and translated in order to combat social isolation, facilitate connectivity serve, support and engage older adults. An effective solution such as “distance connectivity” is recommended to mitigate social isolation risk while remaining at safe physical distances from others. Create safe physical activity such as home exercise to improve the negative impact of ongoing and future COVID-19 restriction.

Keywords: COVID-19, Mental health, Older adults, Social isolation, Wellbeing

Wellbeing in Elderly People in Times of COVID-19 Outbreak: A Narrative Review

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Abstract

Purpose: The objective of this review was to synthesize knowledge regarding elderly wellbeing during the COVID-19 pandemic.

Background: Quarantine and social distancing were important to avoid the spread of the coronavirus. Being active, healthy and happy were important parts of managing daily challenges of the elderly during the pandemic of COVID-19.

Methods: Keyword “Wellbeing” and “COVID-19” associated with “elderly”, “ageing” and “old people” were identified as terms for literature review in PubMed, MEDLINE, Scopus, PsycINFO and Google Scholar. Only researches published in peer-review journals and written in English language will be considered in this study. The studies included in the analysis were only those that published from the inception of the COVID-19 to January 25, 2021.

Results: From a total of 67 unique searches, eight studies were deemed eligible and identified. Elderly people are the most vulnerable population affected by COVID-19 pandemic that can threaten their life and wellbeing. Technology, such as artificial intelligence, can maintain the wellbeing of elderly that will increase their longevity. Due to the lockdown, lack of social interaction, less access to medications and health facilities can worsen elderly physical health, mental and psychological wellbeing. Loneliness, stress, depression, poor sleep and anxiety are experienced by the elderly during the pandemic.

Conclusion: It is important to highlight facets for elderly care and mitigation program related to physical activities and cognitive psychology to prevent mental and functional decline in older people. Further studies should focus on the quality of life and the wellbeing of the older people wellbeing during the outbreak.

Keywords: COVID-19; elderly; outbreak; pandemic; wellbeing.

The cognitive function of the elderly in the neighborhood of high poverty: the role of social participation and education

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Background:

Elderly people living in low socio-economic neighborhoods are at risk of cognitive impairment^[1]. However, some studies reported that education is important in preventing cognitive decline^[2,3]. Other reports showed that community participation is associated with improved cognitive function^[4,5]. The role of community participation in reducing the risk of cognitive decline varies across societies^[6].

Purpose:

To examine the role of social participation and education in delaying cognitive decline for elderly people living in the neighborhood of high poverty.

Method:

The cross-section design of the 2018 Socio-Culture and Education Module of the National Socio-Economic Survey (Susenas-MSBP)^[7]. Samples are limited to 16,504 aged 65 and over. Using the low thresholds assumption^[8], cognitive decline is measured with at least some difficulty in the remembering and concentrating domain of the UN Washington Group on Disability Statistics. Logistic regression analysis is carried out.

Results:

In the neighborhood of low poverty, social participation (AOR 1.91; 95% CI, 1.63-2.23), a high level of education (AOR 0.75; 95% CI, 0.61-0.92) and the interaction between social participation and a high level of education (AOR 0.47; 95% CI, 0.32-0.72) are associated significantly with cognitive function of the elderly. However, with the exception of education, social participation (AOR 2.10; 95% CI, 1.84-2.41) and the interaction of social participation and a high level of education (AOR 0.29; 95% CI, 0.19-0.42) are significantly associated with the cognitive function of the elderly living in the neighborhood of high poverty.

Conclusion:

In the neighborhood of high poverty, education alone cannot prevent the risk of cognitive decline for the elderly. Social participation is very important in preventing the cognitive decline of the elderly, if either living in a neighborhood of high or low poverty. In addition, in order to delay the cognitive decline of the elderly, education is necessary for social activity.

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Appendix

Table 1. Cognitive function status and sociodemographic characteristics of the elderly, stratified by the neighborhood of high and low poverty

Variables	% low poverty (<i>n</i> = 6.497) %	% high poverty (<i>n</i> = 9.557) %	Total (<i>n</i> = 16.054) %	
Age groups	65-74	70.0	67.1	68.3

	75-84	24.6	27.1	26.1
	85+	5.3	5.9	5.6
Education	Primary school and no education (low)	80.0	82.1	81.3
	More than primary education (high)	20.0	17.9	18.7
Physical exercise	No	89.4	89.8	89.6
	<150 minutes per week	7.8	6.9	7.3
	≥150 menit per week	2.7	3.3	3.1
Employment	Employed	35.0	38.9	37.3
	Unemployed	65.0	61.1	62.7
Protein intake on a weekly basis with 7 or less and more than 7 per week	High plant and high animal intake	25.8	25.3	25.5
	High plant and low animal intake	10.1	24.0	18.4
	Low plant and high animal intake	34.4	21.0	26.4
	Low plant and low animal intake	29.7	29.8	29.7
Impaired vision	Yes, can't see	0.9	1.1	1.0
	Yes, severe difficulty	7.1	6.2	6.5
	Yes, some difficulty	32.0	27.1	29.1
	No difficulty	60.0	65.6	63.4
Impaired hearing	Yes, can't hear	0.5	0.6	0.5
	Yes, severe difficulty	5.4	5.7	5.6
	Yes, some difficulty	20.4	19.0	19.6
	No difficulty	73.7	74.7	74.3
Participation in at least 1 community group	Yes	77.9	79.6	78.9
	No	22.1	20.4	21.1
Cognitive function (remembering dan concentrating)	Yes, can't remember/concentrate	1.2	1.3	1.3
	Yes, severe difficulty	4.2	4.8	4.5
	Yes, some difficulty	18.2	17.1	17.5
	No difficulty	76.4	76.8	76.7

Table 2. Multivariate logistic regression model for predictors of elderly people with cognitive decline, stratified by the neighborhood of high and low poverty

Variables	% low poverty (n = 6,497)		p-value	% high poverty (n = 9,557)		p-value
	OR	CI 95%		OR	CI 95%	
Age groups						
65-74	1.00			1.00		
75-84	1.29	1.09 - 1.50	0.002	1.33	1.18 - 1.52	0.000
85+	1.61	1.22 - 2.13	0.001	1.61	1.30 - 2.03	0.000
Physical exercise						
No	1.00			1.00		
<150 minutes per week	0.68	0.49 - 0.93	0.016	0.67	0.52 - 0.89	0.005
≥150 menit per week	0.81	0.49 - 1.35	0.422	0.84	0.59 - 1.28	0.479
Employment						
Employed	1.00			1.00		
Unemployed	2.08	1.76 - 2.47	0.000	1.75	1.53 - 1.99	0.000
Protein intake						
High plant and high animal intake	1.00			1.00		
High plant and low animal intake	1.28	0.98 - 1.66	0.068	1.05	0.88 - 1.24	0.618

Low plant and high animal intake	0.98	0.81 - 1.18	0.834	1.10	0.93 - 1.31	0.278
Low plant and low animal intake	1.36	1.12 - 1.65	0.002	1.27	1.09 - 1.49	0.003
Impaired Vision						
Yes	1.00			1.00		
No	0.25	0.22 - 0.29	0.000	0.26	0.23 - 0.29	0.000
Impaired hearing						
Yes	1.00			1.00		
No	0.21	0.18 - 0.25	0.000	0.22	0.19 - 0.24	0.000
Participation in at least 1 community group						
Yes	1.00			1.00		
No	1.91	1.63 - 2.23	0.000	2.10	1.84 - 2.41	0.000
Education						
Primary school and no education (low)	1.00			1.00		
More than primary education (high)	0.75	0.61 - 0.92	0.005	0.97	0.81 - 1.14	0.678
Social participation and education						
Socially active; low education	0.65	0.45 - 0.95	0.031	0.33	0.24 - 0.48	0.000
Socially active; high education	0.47	0.32 - 0.72	0.001	0.29	0.19 - 0.42	0.000
Socially inactive; low education	1.23	0.83 - 1.83	0.308	0.68	0.47 - 0.95	0.023
Socially inactive; high education	1.00			1.00		

p-value < 0.05 (sig)

Functional Mobility Among Underweight And Overweight Elderly

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Abstract

Background:

The decline in mobility function occurs along with the aging process, closely related to the level of independence and the quality of life of the elderly. This study aims to analyze the functional mobility among underweight and overweight elderly.

Method

This cross-sectional study used data from Indonesia Family Live Survey (IFLS 5). Subjects were elderly aged ≥ 60 years consisting of 495 underweight and 1,115 overweight. The functional mobility was assessed by analyzing the ability to walk 20 meters, 1 km and 5 km.

Results

The results showed the prevalence of impaired mobility function was 70.3% in underweight (BMI < 18.5 kg / m²) and 72.2% in overweight (BMI > 22.9 kg / m²). Gender and physical activity have a significant relationship with mobility function in underweight and overweight elderly. Women had a greater risk of impaired mobility function in both underweight (OR 2.2, CI: 1.5-3.3) and overweight (OR 2.9 CI: 2.2-3.8). A significant relationship between the number of diseases and mobility function was only found in overweight elderly. The results of this study concluded that there was more impaired mobility function in overweight than underweight elderly. This study demonstrate the importance of maintaining physical activity and minimizing disease to prevent impaired mobility function, especially in elderly women with overweight.

Keywords : functional mobility, elderly, underweight, overweight

Physical Activity, Fall Risk and Depression among Filipino Older Persons

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ABSTRACT

Purpose

To determine the proportion of Filipino OPs who perform different types of PA and to explore its association with fall risk and depressive symptoms.

Background

Majority of the exercises performed by Filipino older persons (OPs) are of low intensity, usually leisure and travel related, and are mostly aerobic exercises. Foreign studies show that high level physical activity (PA) can decrease risk for falling and depression. Despite Filipino OPs doing some form of exercise, it has not been studied whether these were associated with fall risk and depressive symptoms.

Methods

The data was derived from the FITforFRAIL or “Focused Interventions for Frail Older Adults Research and Development Program”, a project funded by the DOH-AHEAD through PCHRD. Data from the Comprehensive Geriatric Assessment (CGA) of 405 OPs from NCR, Region IV-A, Region VII, and Region XI were extracted, including PA, fall risk and depressive symptoms. Fall risk was assessed using the Timed Up and Go Test and Functional Reach Test. Data was encoded using Epi-Info and analysed using STATA software. Generating frequencies and proportions, along with association and regression analysis were performed.

Results

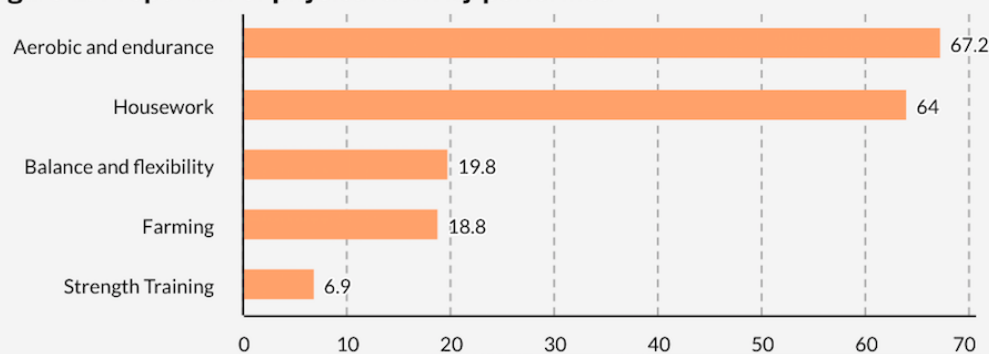
Majority (86.2%) of the participants performed PAs, mostly aerobic exercises and housework. Those who were robust and pre-frail performed PA more than frail participants ($p < 0.001$). However, PA was not found to be associated with fall risk (as measured by the Timed Up and Go test and Functional Reach Test) and depressive symptoms.

Conclusions

Different types of PAs are performed by Filipino OPs. No association was found between performing PA with fall risk and depressive symptoms. Further studies with longitudinal design on the relationship of PA with fall risk and depression are recommended.

Keywords: *Philippines, older persons, physical activity, exercise, fall risk, depressive symptoms*

Figure 1. Proportion of physical activity performed



Association of physical activity with fall risk (TUG)

	Odds ratio (95% CI)	p-value	Pseudo R ²	Model p-value
All exercises combined	0.9997 (0.9994 to 1.0001)	0.11	24.13%	<0.001
Aerobic and endurance	1.0 (0.9995 to 1.0006)	0.954	23.19%	<0.001
Strength	0.999 (0.995 to 1.002)	0.449	23.33%	<0.001
Balance and flexibility	1.003 (0.998 to 1.008)	0.197	23.51%	<0.001
Housework	0.99998 (0.9997 to 1.0003)	0.886	23.27%	<0.001
Farming	1.0002 (0.9994 to 1.001)	0.648	23.14%	<0.001

Fall risk in this table refers to time up and go ≥ 12

* - statistically significant at 5% α

Statistical test used: Logistic regression

Adjusted for age, sex, region, living arrangement, marital status, educational attainment, comorbidities, ever smoked, ever drank alcohol, MCI (MOCA), MNA, history of falls, dizziness, self-reported pain

Association of physical activity with fall risk (TUG)

	Odds ratio (95% CI)	p-value	Pseudo R ²	Model p-value
All exercises combined	1.00005 (0.9998 to 1.0003)	0.684	12.89%	<0.001
Aerobic and endurance	0.9995 (0.9986 to 1.0003)	0.238	13.38%	<0.001
Strength	0.9999 (0.998 to 1.003)	0.955	12.98%	<0.001
Balance and flexibility	0.9999 (0.995 to 1.0047)	0.997	12.98%	<0.001
Housework	1.0001 (0.9999 to 1.0003)	0.459	13.13%	<0.001
Farming	0.9998 (0.999 to 1.001)	0.673	12.99%	<0.001

Fall risk in this table refers to functional reach of ≤ 20.32

* - statistically significant at 5% α

Statistical test used: Logistic regression

Adjusted for age, sex, region, living arrangement, marital status, educational attainment, comorbidities, ever smoked, ever drank alcohol, MCI (MOCA), MNA, history of falls, dizziness, self-reported pain

Association of weekly PA with depressive symptoms

	Odds ratio (95% CI)	p-value	Pseudo R ²	Model p-value
Model 1	0.999 (0.9997 to 1.0001)	0.399	5.40%	0.005
Model 2	1.000 (0.9998 to 1.0003)	0.754	11.07%	<0.001

Statistical test used: Ordinal logistic regression

Model 1: Adjusted for age, sex, region, living arrangement, educational attainment

Model 2: Adjusted for age, sex, region, living arrangement, educational attainment, current smoker, current alcohol drinker, BMI, any comorbidity (geriatrician-diagnosed), medication, MCI (MOCA), sleep problems, self-reported health

Risk of Mercury (Hg) Exposure from Fish Consumption by Muara Angke Fishermen Community at Jakarta Bay in 2018

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Abstract

The increase in industrial development tends to causes environmental pollution. The effects of environmental pollution especially water pollution is alarming. The focus of this study is the level of health risk in Muara Angke fishermen community due to mercury exposure from fish consumption at Jakarta Bay. This study is an environmental health risk analysis research with descriptive design study. The results indicate the mercury concentrations in fish samples have exceeded the threshold and almost all fishermen have been categorized as high risk due to mercury exposure. Therefore, there is a need to strengthen the regulation on industrial waste disposal, especially mercury and do a biomarker screening test of mercury exposure to Muara Angke fishermen community who consume fish catches at Jakarta Bay.

Keywords: *health risks, mercury exposure, fishermen, community*

Elderly and Health Insurance (The Family Protection Function to the Elderly)

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Abstract

Purpose

The purpose of this research is to explore family protection function implementation to their elderly especially the protection of health.

Background

The aging population is still becoming a strategic issue on population management and control. Data from Central Agency on Statistic, Indonesia shows that life expectancy increases from year to year. Nowadays, the managing of the elderly still relies upon the family or communities. The family has a limitation on managing the elderly lives, making the elderly more vulnerable. The elderly who has a pension plan, for example, health insurance may not facings the problem of daily needs in the future, but those who have not pension plan will feel vulnerable meanwhile their physical and mental are not productive anymore. The family protection function implementation is so important because the family is the place that shades the member of the family.

Methods

The study used data from the 2019 Program Accountability Performance Survey (SKAP) in the Family Module. The survey was held in 2019 in 34 provinces in Indonesia. The research used descriptive analysis and will give common information about all variable related to the elderly and their family protection function especially health insurance.

Result

The eight family function with focused on protection function has been implemented by the family to the elderly. The protection function is physic protection, non-physics protection, health protection, the fulfillment of family needs (feeding, clothing, housing). Almost 94,9 percent family has been implementing the protection function. Fulfillment of family needs such as food, cloth, and housing is the highest 56,3 percent, health protection is 53,4 percent, physical protection is 49 percent and non-physic protection 48,8 is percent. Due to the

protection function, 53,4 percent family has been implementing health protection, and one of being marked is health protection. The quantitative analysis with the cross-tabulation between implementing protection function and the health protection ownership. The result is family who has been implementing protection function, 95,5 percent have health protection and 4,5 percent did not have health protection.

Conclusion

Most of the family in Indonesia has been implementing the health protection to the elderly.

Surviving the 3/11 disaster: Reflections of the Great East Japan Earthquake Among Older Adults in Iwate Japan

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Purpose:

This paper explores on older adults' thoughts and insights of the Great East Japan Earthquake that happened on March 11, 2011.

Background:

One of the most shattering natural calamities happened on March 11, 2011 when a very strong earthquake of the scale of 9.0 occurred in East Japan (JMA, 2011). Fukushima, Iwate, and Miyage were the severest prefectures hit by the disaster (Umezawa, 2014). This disaster has placed an indelible mark in the lives of those who survived especially from the older population – one of the most vulnerable sectors in times of disasters

Aside from being susceptible to disasters, Japan has also the highest percentage of elderly people in the world (Sze-Yunn & Arivalagan, 2020). According to the World Bank Data (2019), about 25% of the whole population in Japan is over 65 years old. It is vital, then, to provide specific consideration to the impacts of disasters on the elderly population so as to protect their welfare and well-being.

Methods:

Focused interviews were carried out to realize the profundity of informants' experiences. Using open-ended questions, 15 older adults were able to illuminate their views and reflections of what they lived through of the disaster. Purposeful sampling was utilized in the study. This means that only information-rich subjects were interviewed.

Results:

Informants relived their experiences. Some of them had difficulty in describing what happened, while a few of them broke down. The destruction was extreme. They needed also to deal with the trauma. Because of the 3/11 disaster, informants changed their views about life in general. They became more cognizant of their environment. Their disaster preparedness was intensified. Their disaster kits are always ready in case another natural calamity strikes. Aside from being prepared, the informants also believed that the concept of “tsunami *tendeko*” should be practiced by everyone. Saving one's own life must be the utmost concern of oneself. The

involvement of the informants to different activities instigated by the local government and different neighbourhood associations helped significantly to older adults survival of the 3/11 disaster.

Conclusion:

In conclusion, the informants still experienced the feelings of sadness and trauma brought about the 3/11 disaster. Their accounts disclosed that they undertook trying times and withstood immense agonies in their lives. They recalled how the concept of “tsunami *tendenko*” helped them survived. They also believed that the help and support from the government, non-government organizations, and their neighborhood associations greatly assisted them to cope and survive. Hopefully their insights and reflections will resonate lessons and learnings to other elderly people and to those places where disasters are always prevalent

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The Level of Stress of the Elderly on the Implementation of Health Protocols in the Large-Scale Social Restriction Period (PSBB)

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Currently, various countries in the world, including Indonesia, are facing the Coronavirus disease (COVID-19) pandemic caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2). The Government's strategy in suppressing the spread of COVID-19 is to establish a Large-Scale Social Restriction (PSBB) policy. This program is a limitation of certain activities of residents in an area suspected of being infected with COVID-19 and the application of health protocols (washing hands, using masks and maintaining distance) (Satgas covid-19, <https://covid19.go.id>). Stress is pressure or demands on organisms to adapt or harmonize with the environment so that it has physical and psychological effects and can lead to positive and negative feelings (Indriana, *et.al.*,2010)

This study aims to determine the description and relationship between stress levels in the elderly and the implementation of health protocols during large-scale social restrictions. This study uses data from a survey conducted by KitaAman. The sample is elderly people aged 55 years and over. The independent variable is the stress level of the elderly while the dependent variable is the application of health protocols during the COVID-19 pandemic (wearing masks and washing hands). The covariate variables were gender, consumption of vitamins, taking herbs, smoking behavior and having comorbidities. The research method used logistic regression statistical analysis. The results of this study indicate a relationship between the stress level of the elderly against the health protocol, but there are no confounding variables that influence it. The conclusion of this study shows that stress levels can affect a person's behavior, especially in the elderly, to apply health protocols during the COVID-19 pandemic.

Keywords: Elderly, Stress, Health protocol, COVID-19



Digital tools for diagnosis and treatment Alzheimer's disease on aging population : A systematic review

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Abstract

Purpose : This study aims to identify the use of telemedicine in Asian countries to improve the ability to diagnose and monitor dementia and Alzheimer's disease in the aging population.

Background : Alzheimer's is a disease that interferes with people's ability to think and remember. It also has the same symptoms as people with dementia and/or cognitive impairment in the brain. Based on data on the prevalence of Alzheimer's in Asia in 2015, there were 3.963.274 sufferers. This number is projected to increase by 1.8 times by 2050. By doing so, the increase in the prevalence of Alzheimer's. If it is not prevented, the memory problems can be important for the effective performance of basic activities of daily living (ADL). Considering that the world is currently entering the era of the Internet of Things (IoT), the use of telemedicine in preventing and managing Alzheimer's is an innovation that needs to be considered.

Methods : This study was qualitative research using systematic review. Database sources included Pubmed and EBSCO (CINAHL, Medline, and Academic Research). The keywords for this study is dementia, Alzheimer's Disease, cognitive impairment, MCI (mild cognitive impairment), cognition, technology, telehealth, telemonitoring, e-health, internet, sensor, Global positioning system, phone, smartphone, computer, tablet, smart phone, tablet and smart home. The screening, review, and study selection are completed by three independent reviewers. The outcome that we looked at in previous research is the use of digital assessment and/or monitoring of Alzheimer's Disease.

Results : Seven out of 360 journals from database search that meet outcome criterias are discovered, involving four Asian countries. Journals had various quantitative study methods, including multicenter quasi-experimental intervention study, randomized control trial, and case management. Based on its setting implementations, digital tools discussed in journals were divided by two major categories, including home based (com-robots, telephone-delivered, telephone hotline, computer-assisted errorless learning program) and hospital or other health care facilities based (*Positron Emission Tomography scan, Chinese Frontal Assessment*

Battery, Training with a Therapist-led Training Program). From analysis, most of the studies (6 out of 7 journals) stated that digital tools or methods used had positive impact, such as having high diagnosis accuracy (77%), improving patients ability, and expediting caregiver workload.

Conclusion : This systematic literature review supports the argument that using digital tools will be beneficial for the health facilities to diagnose and treat Alzheimer in the aging population. Further research about these digital tools used in Asian countries with various economic, health workers' skills, infrastructures, and community acceptance background are recommended.

Keywords : Alzheimer's Disease, Dementia, Telehealth, e-health, Systematic Review

COVID-19 in the Decade of Healthy Aging: A Call for a National Health Program for Older Filipinos inclusive of Pandemic Preparedness and Response

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Abstract

Purpose

This paper aims to present the identified medical problems and social vulnerabilities of older persons (OPs) in the Philippines that are associated with an increase in adverse and fatal COVID-19 outcomes as well as the availability of facilities, services, human resources dedicated to OPs.

Background

The year 2020-2030 has been declared as the Decade of Healthy Aging. Health and social risks of OPs and the absence of national programs for health of older persons increases the risks for premature mortality, unnecessary morbidity and limits the attainment of healthy aging. The COVID-19 pandemic has demonstrated the catastrophic impact of a pandemic on older persons, magnifying the importance of a system of care that is inclusive of pandemic preparedness and response.

Methods

Cross-sectional study design. Data derived from the findings of the ethically approved FITforFrail project. Participants were OPs aged 60 years and above from 4 geographic regions selected thru stratified random sampling, according to region and sex.

Health and social status was assessed using the comprehensive geriatric assessment (CGA). Listing of services, workforce, and facilities was also conducted in 27 regional hospitals identified to be Geriatric Centers.

Results

A total of 405 participants agreed to participate and completed the CGA. More than half (55.6%) were diagnosed with NCDs (e.g., hypertension, diabetes, obesity). Geriatric syndromes (e.g., fall risk, depression, dementia) were also apparent. About 15% were frail, and 4.2% reported living alone.

Only 4 (14.8%) out of the 27 regional hospitals had geriatric wards. One geriatric ward was converted to COVID-19 ward and 2 (7.4%) had separate COVID-19 area for geriatric patients.

Nurses and doctors were available while almost all of the facilities had no dentists, psychologists, psychometricians, occupational therapists, and pharmacists dedicated to geriatric patients. Information systems and accessible medical records were deficient at all levels of the health care system.

Conclusion

The study identified NCDs, geriatric syndromes, and social vulnerabilities that are associated with an increase in adverse and fatal COVID-19 outcomes. Facilities, services, human resources dedicated to OPs are limited. There is no national health program for older persons that is inclusive of pandemic preparedness and response, magnifying the vulnerability of older persons in a public health emergency. We recommend a national health program for older persons grounded in health systems strengthening through transformation of existing facilities to emphasize equity and access including outreach services and telemedicine, investments in multidisciplinary team training, and improvement of services such as the CGA to address the health needs of OP with or without COVID-19 across all regions. We further recommend strengthening community-based health care services, inclusion of geriatric services in primary care and referral systems that provide every older person with an electronic medical record that can be accessed at all levels of the health system to include history of COVID19 exposure, tests and vaccination reports.

Keywords: COVID-19, older persons, healthy aging, frailty, pandemic preparedness, Filipinos Economic and Aging Society

Second Demographic Dividend : The Opportunity for The Provinces of Java Island

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Abstract

Population aging is a global phenomenon. Every country in the world has experienced an increase in growth and the number of old age population^[1]. Population aging indicates an improvement in general public health, but it is a disaster if aging occurs before a country becomes rich^[2]. Unfortunately, the elderly were not major priorities of Government as the elderly represented a small percentage of Indonesia's population eventhough Indonesia has the largest population aged over 65 years in Southeast Asia^[3]. In addition, Old Dependency Ratio (ODR) of major ethnic groups in Indonesia such as Javanese is equal to French and Canada, then Madurese and Sundanese is equivalent to the United States^[4]. The large elderly population and rapid aging can create serious socio-economic issues for Indonesia. These problems will delay the development programs due to increased government expenditure on pensions and old age support^[5]. Well-chosen policies will support population aging to convert to the second demographic dividend with the condition that the government have to guarantee the health and education of the elderly in order for them to remain productive^[6]. This paper aims to examine the potential of the second demographic dividend in Indonesia by explaining the effect of Old Dependency Ratio (ODR) on economic growth using the panel data method in the provinces of Java Island, the fastest aging provinces in Indonesia in 2010-2019. The results showed that the Old Dependency Ratio significantly affect the economic growth, which can also be explained through the inverted-U shape relationship between demographic changes and economic growth in the provinces of Java Island; growth rates initially increase then decrease with population aging. These findings confirmed that the government should formulate policies and facilities that will encourage the elderly, especially those who are still actively involved in the labor market to enhance their productivity and enable them to still contribute to achieving increased economic growth.

Keywords: second demographic dividend, java, indonesia

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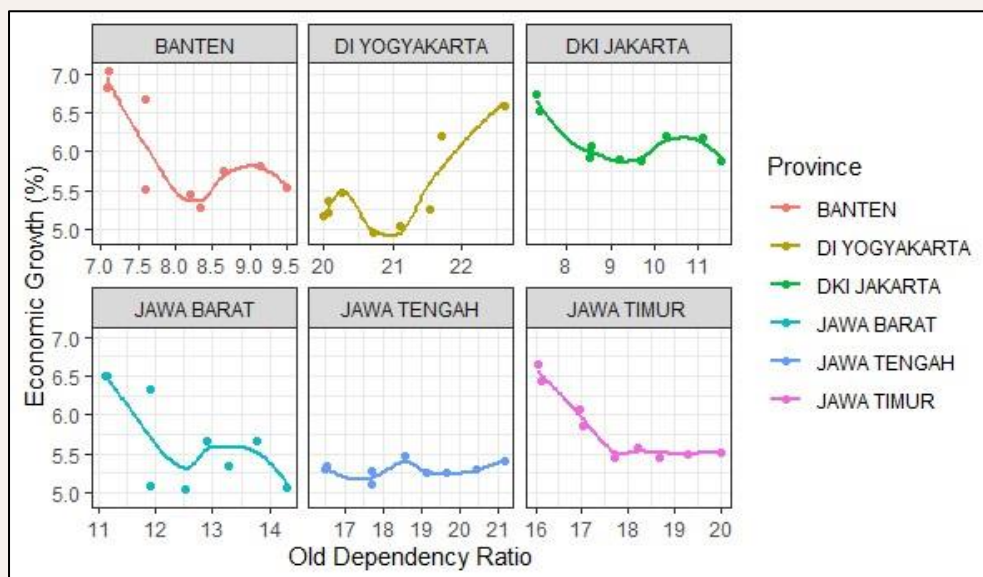
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Appendix



Picture 1. Economic Growth vs Old Dependency Ratio

Dependent Variable: LN_PDRB
Method: Panel EGLS (Cross-section SUR)
Date: 01/30/21 Time: 22:52
Sample: 2010 2019
Periods included: 10
Cross-sections included: 6
Total panel (balanced) observations: 60
Linear estimation after one-step weighting matrix
Cross-section SUR (PCSE) standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	16.91569	0.442282	38.24635	0.0000
ODR	0.153854	0.010379	14.82370	0.0000
ODR2	-0.001644	0.000179	-9.182461	0.0000
LN_APBDD	0.035670	0.015672	2.275986	0.0273
LN_FDI	0.013248	0.003148	4.208928	0.0001
TPAK	0.004572	0.001431	3.194361	0.0025

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics			
R-squared	0.999508	Mean dependent var	228.5524
Adjusted R-squared	0.999408	S.D. dependent var	384.2306
S.E. of regression	0.890365	Sum squared resid	38.84474
F-statistic	9958.383	Durbin-Watson stat	1.357738
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.998044	Mean dependent var	20.21997
Sum squared resid	0.122081	Durbin-Watson stat	0.611299

Picture 2. Estimation Result

Informal caregiving time and its cost in context of older Singaporeans receiving human assistance with their daily activities

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Purpose: Little is known about the monetary value of informal caregiving in Singapore. The study quantified the amount of caregiving time provided by primary and secondary informal caregivers of Singaporeans aged ≥ 75 years receiving human assistance with their daily activities and calculated its monetary value.

Background: In societies like Singapore, there is a strong preference by older adults and their family members for family-based or informal care over formal care. This is due to various reasons such as cultural norms and values and perceived lower financial costs associated with informal care. The importance of informal caregivers, who play a central role in an older Singaporean's life, will only increase with rapid population ageing in Singapore. In the absence of informal caregivers, the need to substitute with formal care workers and services would overwhelm a country's healthcare and social services budget. At the same time, informal caregivers face negative economic consequences due to caregiving, including financial difficulties as a result of forgone income and poor health.

Methods: Data from the baseline wave of the Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TraCE) study, a longitudinal dyadic study on informal caregiving of Singaporeans aged 75 or above receiving human assistance with their daily activities, were used. Information about the time spent by the primary and secondary informal caregivers in a typical week in helping the index care recipient (i.e. the care recipient in the 'care recipient/caregiver' dyad enrolled in TraCE) with activities of daily living (ADLs), instrumental ADLs, healthcare and social care use, and other needs was obtained from 278 primary informal caregivers through structured interviews. The proxy good method was applied for the monetary valuation of caregiving time, whereby time (hours) spent on

caregiving is valued at the labour market price of a close substitute – we used the median gross monthly income of a full-time Health and Social Services worker in Singapore.

Results: Primary informal caregivers provided 29.3 ± 28.3 hours of care per week to the index care recipients on average and the estimated annual cost of their caregiving time was S\$33,550. Secondary informal caregivers provided fewer care hours, on average, to the index care recipients, at 13.3 ± 19.9 hours per week. The estimated annual cost of their caregiving time was S\$15,229. At the national level, the annual cost of informal caregiving time (contributed by both primary and secondary informal caregivers) in context of Singaporeans aged ≥ 75 years receiving human assistance with their daily activities was estimated at S\$2.74 billion in 2020.

Conclusion: Our study highlights the substantial time commitment towards care provision by primary and secondary informal caregivers of older adults, and provides its monetary value. The estimated informal caregiving time and its cost will be helpful in informing social policy measures that aim to enhance caregiver support. Furthermore, economic evaluations of models of care for older adults, especially in societies like Singapore where there is a strong preference for family-based or informal care, should include informal caregiving time and its cost.

Key words: caregiving, informal care, cost, proxy good method

Short biography:

Nur Diyana Binte Azman holds a Bachelor of Social Sciences (Honours) Degree in Sociology from the National University of Singapore. She is currently a Research Assistant at the Centre of Ageing Research and Education (CARE) at Duke-NUS Medical School, Singapore. At CARE, Diyana is involved in the Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TRaCE) project – a longitudinal dyadic study on informal caregiving. She is interested in understanding the dynamics of the intergenerational family and how the family can affect the older adult's ageing experience.

Informal caregiving time and its cost in context of older Singaporeans receiving human assistance with their daily activities

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² Health Services and Systems Research, Duke-NUS Medical School, Singapore

³ Department of Family Medicine and Community Health, Duke University, USA

Purpose:

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Background:

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Methods:

Data from the baseline wave of the Caregiving Transitions among Family Caregivers of Elderly Singaporeans (TraCE) study, a longitudinal dyadic study on informal caregiving of Singaporeans aged 75 or above receiving human assistance with their daily activities, were used. Information about the time spent by the primary and secondary informal caregivers in a typical week in helping the index care recipient (i.e. the care recipient in the 'care recipient/caregiver' dyad enrolled in TraCE) with activities of daily living (ADLs), instrumental ADLs, healthcare and social care use, and other needs was obtained from 278 primary informal caregivers through structured interviews. The proxy good method was applied for the monetary valuation of caregiving time, whereby time (hours) spent on caregiving is valued at the labour market price of a close substitute – we used the median gross monthly income of a full-time Health and Social Services worker in Singapore.

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Conclusion:

Our study highlights the substantial time commitment towards care provision by primary and secondary informal caregivers of older adults, and provides its monetary value. The estimated informal caregiving time and its cost will be helpful in informing social policy measures that aim to enhance caregiver support. Furthermore, economic evaluations of models of care for older adults, especially in societies like Singapore where there is a strong preference for family-based or informal care, should include informal caregiving time and its cost.

Mean informal caregiving hours per week, its annual cost and the national-level projection of the annual cost, by caregiver type

CG type	N (%) ^a	Mean caregiving hours per week (SD)	Annual cost of informal caregiving time ^b			National-level projection of the annual cost of informal caregiving time ^c		
			Middle estimate (S\$)	Conservative estimate (S\$)	Generous estimate (S\$)	Middle estimate (S\$, billion)	Conservative estimate (S\$, billion)	Generous estimate (S\$, billion)
Primary informal CG	278 (100%)	29.3 (28.3)	33,550 2,796/month	31,554 2,629/month	42,067 3,506/month	2.23	2.10	2.79
Secondary informal CGs	140 (50.4%)	13.3 (19.9)	15,229 1,269/month	14,323 1,194/month	19,095 1,591/month	0.51	0.48	0.64
All informal CGs	278 (100%)	36.0 (34.7)	41,221 3,435/month	38,769 3,231/month	51,686 4,307/month	2.74	2.58	3.43
FDWs	134 (48.2%)	42.1 (32.7)	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d
All informal CGs and FDWs	278 (100%)	56.7 (49.5)	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d	N.A. ^d

Note. CG = Caregiver; FDW = foreign domestic worker; SD = standard deviation.

^a The number and proportion of care-recipients receiving care from the specified type of caregiver

^b Annual cost of caregiving time = Mean caregiving hours per week X (hourly cost of the median gross income of a full-time Health and Social Services worker in Singapore x 52 weeks) ^c Proportion estimates from a nationally representative study of older Singaporeans, THE SIGNS Study-I, conducted in 2016-2017. It was estimated that 30.9% (66,424 persons) of Singapore's resident population aged 75 years and above received human assistance with their daily activities.

^d Cost of informal caregiving time is not applicable for formal caregivers such as FDWs

Covid-19 and Mental health of Aging Population: An Application of the Resiliency Theory

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Abstract

Background:

The global SARS-2 Coronavirus pandemic has been causing rapid and dramatic changes all over the world. The elderly, who are already experiencing major health issues, are more vulnerable to adverse mental health impacts as a result of fear and exposure related to COVID-19. The previous research studies revealed that COVID-19 pandemic identified an increase in the expression of negative emotions and social risk, and a decrease in the expression of positive feelings and satisfaction with life.

Objective:

Extending the studies of adverse effects of SARS-2 Coronavirus from general health consequences, this research explores the complexities in geriatric depression as a result of the pandemic related fear and exposure. The study follows the resiliency theory as a theoretical framework that embrace the role of cognitive traits or coping abilities as strong resilient factor to enrich the understanding of the relation between pandemic adversity and its mental health consequences.

Methods:

By using the convenient sampling technique, primary survey data were collected from the 310 people above 50 years of age from Rawalpindi, a metropolitan city in Pakistan. In addition, the study identifies the features of fear of Covid-19 and depression factors and explain their relations by using the multiple regression by SPSS, and Hayes Process was used to generate the results of the moderation effect of self-efficacy between fear and exposure of Covid-19 and depression.

Results:

The main results of the study discover that the pandemic related fear and exposure to virus are positively associated with the depression. However, self-efficacy shows the negative direct effect on the depression, and Self-efficacy as a resilient factor significantly moderates the

relation between the fear of Covid-19 and depression, but showing no moderation effect between the covid-19 exposure and depression.

Research implications and Conclusion:

Based on the outcomes, some severe geriatric care policies that could weaken the pandemic related fear, exposure to virus and depression are recommended. Moreover, this research discusses the usage and outcomes of these important factors and evaluates the policy implications in response to global public health concern during Covid-19 pandemic. The study also identifies ways to use different mental health related constructs for elderly people to return to normal daily life by strengthening their cognitive abilities. The research study concludes that these variables may reconstruct the behavioural response of the elderly people, which can provide basis for the pandemic related fear from the perspective of geriatrics mental health. These research findings are important for policymakers to consider preventive mental health measures in respond to COVID-19 pandemic.

Key words: Elderly population, Covid-19 fear, Exposure to Virus, Depression, Pakistan

Theme: Economic and Aging Society

The Ageing Population in Indonesia: Challenges and Opportunities

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ABSTRACT

Background

The proportion of people age 60 years and older in Indonesia has increased from 7.6% in 2010 to 9.8% in 2020, which indicates ageing population. With the increasing number of older people, it is important for the Indonesian Government to identify challenges and opportunities of the ageing population to be able develop appropriate policies and programs to optimize the quality of life of the older people.

Purpose

To identify and provide information on challenges and opportunities of the ageing population to policy makers. Methods

A review of literature using ‘*Preferred reporting items for systematic review and metaanalyses (PRISMA)*’ technique was conducted from October to December 2020. Search terms included ‘ageing’, ‘ageing’, ‘*lanjut usia*’, and ‘*lansia*’, resulting in 46 publications in journals, thesis, books, and reports. Inclusion criteria include demographic, health, social and economic situation as well policies and programs for ageing population both at global and national levels.

Results

The ageing concepts that have been developed since the 1950s reflect the global perspectives on ageing. Older people are not seen as burden but as potential human resources for development. Therefore, efforts have been geared toward promoting healthy, active, successful and productive ageing.

In line with those perspectives, the Indonesian Government has passed Law no. 13 in 1998 regarding Elderly Social Welfare and in 2015 has launched a National Strategy for Ageing Population. The vision of this strategy is to achieve “healthy, active, productive, and resilient ageing population”. This strategy outlines efforts for improving the quality of life of the elderly, which covers aspects of institutions; social protection; health care; and rights of the older people. However, surveys and reports revealed some issues of the older people situation in Indonesia. The 2019 National Social-Economic Survey showed that 51 percent of the elderly in Indonesia

have health problems, such as hypertension, arthritis, and stroke. Only 25 percent of them seek medical treatment, despite 70 percent coverage of the national health insurance. The physical conditions of older people affected their cognitive and mental health.

The survey also showed that 61.75 percent of the elderly are household head. This situation is related with the culture in Indonesia, where elderly are highly respected and considered to have the most wisdom to become household head. Around 27 percent of the elderly live with their children or other family members. As in other Asian countries, the elderly in Indonesia tend to live with their families. About 49 percent of them still work, mostly in informal sectors. Many of the elderly still actively involved in religious and social activities in their communities.

In order to optimize the potentials of the elderly, the Indonesian Government is expected to address the above challenges and strengthen efforts to promote healthy, active, productive, and resilient elderly

Recovery from Mobility Limitations among Older Americans

Yuanyuan Deng

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Abstract

Mobility limitations can affect an individual's health, access to health care, labor supply, application to social insurance programs, and pension claiming decisions. Measures of mobility limitations (even self-reported ones) have been considered as objective measures of health status and few concerns have been raised about potential measurement error problems, with these measures. Using data from the Health and Retirement Study, we observe that the incidence of recoveries from mobility limitations is very high between the first and second time that individuals are interviewed, and declines sharply to a stable level in subsequent waves. This finding is more pronounced in relation to activities that are more difficult or less likely to be performed in daily life. Based on this observation, we question the initial accuracy of measures of mobility limitations, which could be later ameliorated through learning about the ability of the individual to perform the activity. We provide empirical evidence to show that this unusually high incidence of recovery from mobility limitations could be in part the result of improvements in health knowledge instead of solely caused by real health improvement. Our results are not only relevant to any empirical researchers using mobility limitation indicators in a panel data setting, but also to researchers analyzing the effectiveness of policy interventions on health outcomes using self-reported health measures, since the effects of these policies are likely to be confounded with improvements in health knowledge, and the results are biased towards surprisingly large short-run effects and much smaller medium and long-run effects.

Bio

Yuanyuan Deng is a CEPAR Senior Research Associate. She is an applied microeconomist with broad empirical interests focusing on Health Economics, Public Economics, and Labor Economics.

Her current research develops a life-cycle model of labor supply and consumption for urban males with heterogeneous skill types to evaluate the implications for labor supply and individual welfare of three reforms to the Basic Old-Age Insurance pension scheme in China. She is also working on projects related to population aging, the effect of gender-concordance, the intergenerational consequences of depression, mobility limitations of older Americans, and the relationship between measures of labor supply flexibility and portfolio-choice decisions.

Before rejoining UNSW in 2018, Yuanyuan held positions at Singapore Management University. Yuanyuan received her Ph.D. in Economics from the State University of New York-Stony Brook in 2016. During her Ph.D. study, her research focused on Medicare costs at both the individual and aggregate level, as well as the interactions between Medicare and Social Security. Her research has been supported by the Michigan Retirement and Disability Research Center (MRDRC) and the Center for Retirement Research (CRR) at Boston College.

CONDITIONS UNDERLYING THE PRESENCE OF HEALTH PROBLEMS OF THE ELDERLY POPULATION IN TANAH BUMBU DISTRICT

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Abstract

Purpose: This study aims to see the effect of several conditions underlying the presence of health problems of the elderly in Tanah Bumbu District, South Kalimantan.

Background: The elderly people are one of the groups vulnerable to health problems. The decrease of physical functions, such as reduced hearing and vision, digestive disorders, and decreased functions of internal organs are common issues faced by the aging population. Additionally, they are more susceptible to infection because of the compromised immune system. As of 2019, they have reached 7% of the national population. The proportion of elderly people in Indonesia, including in Tanah Bumbu, continues to increase. Meanwhile, healthcare programs targeted at the aging population are still very limited in the country. So far, the common one is the special posyandu for the elderly. However, this program is not active in all Indonesian regions.

Methods: This research was conducted with a cross-sectional design and logistic regression analysis method using secondary data from 2020 provided by the local statistic agency (BPS) of Tanah Bumbu. The sample in this study was 23,804 elderly people based on the BPS records.

Results: The results showed that smoking status (OR 10,435; 95% CI 8,366-13,015) affected the health complaints of the elderly under the assumption that other variables were constant. Besides that, the ownership of national health insurance (OR 1,929; 95% CI 1,819-2,047) and the types of living arrangement (living together with at least 3 generations, with family, or with a partner) also affect the presence of health problems in the elderly.

Conclusion: Interventions that can change the smoking behavior, increasing the coverage of health insurance ownership, as well as considering the elderly's living arrangement are

desirable since they may improve the health status of the elderly. Promoting other relevant programs such as the elderly posyandu by the health workers and community is also advised.

Keywords: elderly, health problems, Tanah Bumbu

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A short biography of the presenting author

My name is Wulan Sari RG Sembiring, but my friends call me Wulan. I was born in Bagok, March 9th 1989. I started my career as an assistant lecturer in public health studies program at Lambung Mangkurat University. After that in 2011 I became a researcher at Balai Litbangkes Tanah Bumbu Kementerian Kesehatan RI. Suddenly, I found that my passion is to become a researcher. In 2020 I completed my master degree at the University of Indonesia with a biostatistics specialist.

Table 1. Frequency distribution and the relationship between smoking status and other independent variables with health problems in the elderly

Independent Variables	Health problems				Total	%	P value	OR	95%CI
	No		Yes						
	n	%	n	%					
Smoking status									
- No	10679	46.7	12195	53.3	22874	96.1		1	
- Smoking	93	10.0	838	90.0	931	3.9	0.000	7.89	6.36 – 9.80
Gender									
- Female	4894	45.9	5761	54.1	10655	44.8		1	
- Male	5877	44.7	7271	55.3	13148	55.2	0.057	1.05	0.99 – 1.10
National health insurance ownership									
- No	5860	49.1	6084	50.9	11944	50.2		1	
- Yes	4911	41.4	6948	58.6	11859	49.8	0.000	1.36	1.29 – 1.43
≥3 generations under one roof									
- Yes	2626	36.3	4601	63.7	7227	30.4		1	
- No	8145	49.1	8431	50.9	16576	69.6	0.000	0.59	0.56 – 0.63
Living with family									
- Yes	3360	54.5	2809	45.5	6169	25.9		1	
- No	7411	42.0	10233	58.0	17634	74.1	0.000	1.65	1.56 – 1.75
Living with a partner									
- Yes	4498	51.0	4324	49.0	8822	37.1		1	
- No	6273	41.9	8708	58.1	14981	62.9	0.000	1.44	1.37 – 1.52

Table 2. Multivariate Logistic Regression on health problems/complaints in the elderly

Independent Variables	Full Model			Final Model		
	P value	ORadj	95%CI ORadj	P value	ORadj	95%CI ORadj
Smoking status						
- No		1			1	
- Smoking	0.000	10.27	8.22 - 12.83	0.000	10.44	8.36 - 13.01
Gender						
- Female		1				
- Male	0.238	1.03	0.98 – 1.09			
National health insurance ownership						
- No		1			1	
- Yes	0.000	1.93	1.82 – 2.05	0.000	1.93	1.82 – 2.05
≥ 3 generations under one roof						
- Yes		1			1	
- No	0.000	2.65	2.31 – 3.05	0.000	2.64	2.30 – 3.04
Living with family						
- Yes		1			1	
- No	0.000	5.18	4.51 – 5.96	0.000	5.14	4.47 – 5.91
Living with a partner						
- Yes		1			1	
- No	0.000	6.16	5.35 – 7.08	0.000	6.13	5.33 – 7.05

*ORadj = Odds Ratio adjusted

CONDITIONS UNDERLYING THE PRESENCE OF HEALTH PROBLEMS OF THE ELDERLY POPULATION IN TANAH BUMBU DISTRICT

A Silent Impedence of Falls for Older People in Developing Countries: An Integrative review

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Abstract

Many other developing countries, including Indonesia, given the rapid growth of the elderly populations. The extent of falls amongst older people in those countries has emerged as a major concern for health policy. However, evidence regarding the prevention of falls in later life in developing countries remains scarce. This article addresses this by presenting the findings from a literature review focusing on the identification and prevention strategies relevant to falls in the elderly of developing countries. A search of PubMed, SCOPUS, and Google Scholars databases was performed. The terminology combined all possible alternatives of the following keywords: falls, fall risk OR fall predict* OR fall screen* OR developing countries. Eligible studies were published between October 2020 and January 2021 in English or Bahasa language and regarded the implementation of falls interventions among the older generations. Outcome measures in terms of the intervention effects needed to be reported. In total, six studies were ultimately included in this review. The major risk factors identified are impaired balance, polypharmacy, and history of previous falls. Other risk factors include advancing age, female gender, visual impairments, cognitive decline especially attention and executive dysfunction, and environmental factors. This study suggested interventions involve exercise and attention to coexisting medical conditions. Recommendations for reduction of environmental hazards to manage falls in older patients are also summarized.

Keywords: fall risks, older adults; intervention; developing countries

Hygiene Sanitation and The Presence Of *Salmonella Typhi* at Food Handlers in The Elementary Schools in Tangerang City Year 2017

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Abstract

Food handlers have an important role in the typhoid transmission, these food handlers are possibly carriers which can transmit *S.typhi* bacteria during food processing. This research aims to know the description of the individual characteristics, environmental sanitation and the presence of *Salmonella typhi* at food handlers in the elementary school in Tangerang city. This study is a descriptive study with cross-sectional design study and consists of large samples as much as 208 food handlers. Data collection was done using questionnaire and examination of food handlers rectal swab sample with reagent API 20E Biomeriux. The results of the laboratory test of rectal swab samples showed that all of them are entirely negative for *S. typhi* (100%). Based on the statistical analysis results of the individual characteristic variables were obtained that respondents aged 36-45 years (34.1%), dominantly women (51.9%), low educated (50.5%), did not have a history of typhoid fever in their family (70.7%), knowledgeable enough about typhoid (73.6%), having a clean and healthy life behavior quite well (91.8%), did not have the habit of eating outside the home (64.9%), had a less good hand hygiene (56.3%) and have the open trash cans (73.6%). The school should improve the hygiene and sanitation of the school canteen by completing the provision of supporting hygiene and sanitation facilities.

Keywords ; Salmonella Typhi, Food Handlers, Hygiene, Sanitation, elementary school

Micronutrient Role In Preventing Alzheimer's Disease Progression

Yuliana

ABSTRACT

This paper aims to describe the micronutrient role in the Alzheimer's disease. Vitamin and mineral can inhibit the progression of the Alzheimer's disease. Alzheimer's disease prevalence increased over the past years, therefore it is important to review the possibility of the disease inhibition. This is a literature review. The literature was selected from PubMed. The keywords were Alzheimer's disease, micronutrient, mineral, and vitamin. A diet rich in antioxidant vitamins and minerals can improve the cognitive functions of Alzheimer's disease patients. This paper has limited data because it is not a meta-analysis. This paper is useful for giving information about how to prevent Alzheimer's disease progression through micronutrient consumption.

Keywords: Alzheimer's disease, micronutrient, mineral, and vitamin.

Description Of Clean And Healthy Living Behavior During The Covid-19 Pandemic In Antang Village, Makassar City

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ABSTRACT

The policy of working from home and maintaining physical distance is needed to prevent transmission of COVID-19, as well as the adoption of clean and healthy living habits at the family and environmental level. In addition, eating healthy foods, using masks, hand-washing with soap before doing activities and after doing activities and exercising regularly (Irfani Aura Salsabila et al., 2020). Researchers aimed to find out the picture of PHBS during the COVID-19 pandemic in Antang, Makassar City. The type of this research was descriptive research. The population in this study were people in the Antang family, the number of samples were 90 respondents using accidental sampling technique. The instruments of research used form of questionnaires and interviews. The results showed that 11 respondents (100.0%) who were assisted by health workers were given 11 respondents (100.0%) exclusively breastfed, 11 (100.0%) babies and toddlers who were weighed regularly were 11 respondents (100.0%) with CTPS behavior as many as 57 respondents (63.3%), using clean water as many as 82 respondents (91.1%), using healthy latrines as many as 90 respondents (100.0%), eradicating mosquito larvae as many as 75 respondents (83.3%), consumption of fruits and vegetables with 82 respondents (91.1%), 67 respondents (74.4%) who do not routinely do physical activity, do not smoke in the house as many as 72 respondents (80.0%). The conclusion of this research, most people have implemented community PHBS during the Covid 19 Pandemic. The suggestion for further researchers to conduct research related to the relationship between PHBS implementation and the reduction of covid transmission

Keywords: COVID-19, Clean and Healthy Living Behavior

Anticipating the Consequences of Ageing Population in Bangka Belitung Islands: An Analysis of Prevailing Explanations

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Abstract

Background: The increasing number of life expectancy at birth in Bangka Belitung Islands has caused slightly improvement of older population in the area. The number of older populations in Bangka Belitung Islands has reached to 116,070 in 2019 to 122,386 persons in 2020. However, the rates of chronic disease and its economic burden are rising faster in the area. Hence, this study compares prevailing explanations of ageing population trends and assesses some social-economic consequences of the growth of older populations in the Islands.

Methods: This study employed a review of the published literature on elderly care and its challenges. A systematic review of studies published from October to December 2020 was conducted in PubMed and Google Scholar. Key search terms were "elderly", "socio-economic consequences", "older persons", and "Bangka Belitung Islands". Four studies met the analysis criteria.

Findings: Increasing age in Bangka Belitung Islands has an impact on the decline of organ function and results in increasing dependence on others, including family. While neglect often happens to older people who live alone and lack family support, the self-help elderly group can help optimize their health. Older people with chronic diseases, physical limitations, and dependence on others for activities of daily living need further help from the family and community. Efforts must be made to increase older adult's' independence to help them overcome naturally occurring changes and health problems.

Conclusions: Rising ageing population will lead to further health and economic burden in the Islands. Practicing healthy life style of the population will help increasing the quality of their later life. At a time when the oldest-old cohorts in Bangka Belitung Islands are at the beginning of their projected growth, these findings are vital for providing policy makers with more information on the urgency of making more geographically targeted policy to improve the quality of life of elderly in the Islands.

Keywords: elderly; health; quality of life; socioeconomic factors.

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Abstract theme: Economic of Ageing Population

Abstract submission for oral presentation.

A figure related to the research

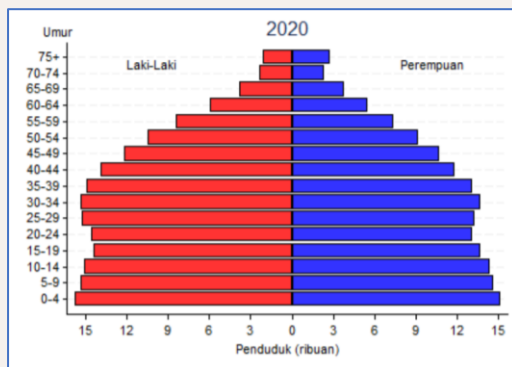


Figure 1. Population Pyramid, Bangka Belitung Islands, 2020

A short biography of the presenting author

Yudi Rafani is a lecture of a private university in Bangka Belitung Islands. He has been also worked for the National Population and Family Planning Board in Bangka Belitung Islands for more than a decade. All his published studies can be seen:

<https://scholar.google.co.uk/citations?user=RQVEwcAAAAAJ&hl=en>

Determinant Factors on Vaccine COVID-19 Hesitancy in Indonesia

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Purpose:

This study aims to analyze the determinant factors associated with the COVID-19 vaccine hesitancy in Indonesia.

Background:

The level of vaccine efficacy and vaccine hesitancy factor has a relationship with the vaccination coverage to obtain herd immunity. A minimum of 60% vaccine efficacy level requires as close as to 100% of vaccination coverage. Using vaccine with efficacy level 65.3%, COVID-19 Handling and National Economic Recovery Committee COVID-19 dashboard shows vaccination phase 1 has covered 66% target for the first dose and 19% target for the second dose as of February 10th, 2021

Methods:

This study used a quantitative approach method. The study population was people aged 18-60 years who met the requirements for the COVID-19 vaccine receptor. The online survey was performed by distributing Google Form questionnaires through the Whatsapp platform for two weeks. There were 283 samples selected using random sampling technique. The 3Cs model (Confidence, Complacency, and Convenience) was used as a conceptual framework for the study. The SAGE vaccine hesitancy survey was adopted and performed. Vaccine Hesitancy was assessed based on total scoring of the categories on the Three C's Model, i.e acceptor, hesitant, and refuser. Independent variables were socio-demographic characteristics, contextual influences, individual and group influences, and vaccine-specific issues. Multinomial logistic regression was employed to identify determinants factor of the hesitancy of a COVID-19 vaccine.

Results:

The majority of the study samples were respondent lived in DKI Jakarta and non-health workers respondent. Based on the 3C's Model assessment, the respondent had strongly disagreed on the health system and providers-trust question. There was a significant relationship between individual perceptions and environmental/group influences with the vaccine hesitancy with a p-value less than 0,05 (OR=1,59; 95% CI: 1.12, 2.20)

Conclusion:

This study shows the specific issues related to vaccines such as vaccine efficacy which have raised concerns, proven not to be related to Vaccine COVID-19 hesitancy in Indonesia as well

as the demographic characteristic factor. The health system includes reliable health workers is one of the determinants that affect individual perceptions relating to confidence in vaccine acceptance. The confidence index was significant for non-health workers. Anticipation on vaccine hesitancy should be targeting on individual and group influence factors.

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