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- Biology of frailty
- Physical frailty
- Neurosciences of frailty
- Clinics and public health
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strategy to prevent, delay, and reverse the progression of frailty is crucial. So far, various types of interventions such as physical activity, cognitive stimulation, and psychosocial interventions have been implemented and evaluated. However, it remains difficult to motivate older people, particularly those with frailty, to participate in these interventions. Therefore, it is essential to focus on frailty interventions and factors affecting their intention to participate and retention.

Objectives: This study aimed to explore pre-frail and frail Chinese older people's residential greenness, group-based frailty prevention program in Hong Kong, along with their views regarding factors determining participation and retention in such programs.

Methods: Seventy-seven program participants conducted a total of 38 community-dwelling older people aged 54 - 84 years (mean age, 64.9 years; females, 58%; retired, 97%) screened with pre-frail or frailly completing a 12-week multi-component (involving physical, cognitive, and social activities), group-based frailty prevention program. Semi-structured interviews and thematic analysis were conducted.

Results: The majority of participants had a positive attitude towards the frailty prevention program. Two primary themes were identified as key motivators to participate. First, perceived benefits of the program, which is about the opportunity for skills learning and perceived physical and cognitive function benefits from training. Second, enjoyment, which is related to active participation, self-efficacy, the opportunity for social networking and interactions, and sense of dignity (staff member's attitudes: showing respect and care).

Conclusion: These findings highlighted several important factors for consideration in future design of frailty interventions regarding the needs of pre-frail and frail older people, which could help to increase and sustain their participation in community-based frailty prevention programs.

Communication 3: The Association between Frailty and Recovery of Independence among Disabled Older Adults in China

Disability—a strong risk factor for shorter survival, reduced physical activity, depression, and social isolation. Fewer than a third of disability-free older adults in China have demonstrated that disability is a dynamic rather than an irreversible process and transitions among different disability states are common. However, the factors affecting recovery of independence among older adults aged 65+ years in China have not yet been fully explored.

Funding: This study was partly supported by the Chinese University of Hong Kong. The Chinese University of Hong Kong, Hong Kong SAR. (2) Department of Medicine and Therapeutics, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China.

Background: Disability is a prevalent geriatric syndrome among older Chinese adults, about 50% and 10% of those aged 65 years are pre-frail and frail, respectively. Therefore, an effective community program was designed to develop an intensive intervention to prevent frailty and promote recovery of independence among adults aged 66 years in China. Methods: Data were from the Chinese Health and Retirement Longitudinal Study (CHRLS), a nationally representative sample of middle-aged and older persons in China. Disability was defined as having difficulty in any of the five basic activities of daily living (eating, bathing, dressing, toileting, eating, and transferring). Frailty was assessed using five criteria measured two years before being disabled: weakness, slowness, inactivity, exhaustion, and loss of weight. Pre-frailty was defined as “non-frail” (0 criteria; n = 195), “pre-frail” (1-2 criteria; n = 286), and “frail” (3-5 criteria; n = 35). Recovery was defined as regaining independence in all ADLs within two years of being disabled. The occurrence of the 516 newly disabled persons, 47.9% of the non-frail, 45.8% of the pre-frail, and 25.7% of the frail recovered from disability in two years, representing socio-demographics, physical, and mental chronic conditions, depression, cognitive function, and severity of disability, the odds of regaining independence among the frail were 62%, 35%, and 22%, respectively (OR = 0.38; 95% CI [0.16, 0.91]). We found no significant difference between the non-frail and the pre-frail (adjusted OR = 0.93; 95% CI [0.63, 1.37]), suggesting that pre-frailty was not a predictor of poor recovery of ADL disability among newly disabled Chinese older adults. Knowledge of predictors for recovery from disability may offer a basis for designing and implementing frailty prevention programs, promoting recovery from disability, maintaining independence after recovery, and preventing recurrent disability.

S2- MALNUTRITION AND FRAILTY.

Malnutrition and physical frailty are distinct geriatric syndromes present in a majority of elderly persons in the nursing home, hospital, primary care, and community settings. It is more than co- incidental that they are often found together in the same individual, since they share many common pathophysiological pathways. Malnutrition, resulting from age-related changes, and frailty, pertaining to age-related risk and demand, is arguably the major cause of muscle wasting and physical frailty, among other causes such as physical inactivity, hormonal and metabolic changes, and chronic and/or secondary health problems. There is increasing evidence to support the role of calorie and protein deficiency in the development and aggravation of physical frailty. Current evidence suggests that older persons should achieve energy intake above 25 kcal/kg/day and protein intake of 1.0 to 1.2 g/kg-BW (higher than the RDA for young adults of 0.8g/kg-BW) evenly distributed over 3 meals on a daily basis. Nutritional screening and intervention guidelines have shown that frailty among community-living older persons is reversible by nutritional, physical, and cognitive interventions. One-year increase in residential greenness had lower level of frailty. Living in highest vs the lowest quartile of greenness is equivalent to 6.5 years of aging. These findings suggest that environmental exposure to greenness may be a determinant of healthy longevity.

S3- MALNUTRITION AND FRAILTY: From Research to Intervention.

The majority of participants had a positive attitude towards the frailty prevention program. Two primary themes were identified as key motivators to participate. First, perceived benefits of the program, which is about the opportunity for skills learning and perceived physical and cognitive function benefits from training. Second, enjoyment, which is related to active participation, self-efficacy, the opportunity for social networking and interactions, and sense of dignity (staff member’s attitudes: showing respect and care).

Conclusion: These findings highlighted several important factors for consideration in future design of frailty interventions regarding the needs of pre-frail and frail older people, which could help to increase and sustain their participation in community-based frailty prevention programs.

Communication 1: Malnutrition and Frailty: From Research to Intervention, Tze Pin Ng1,2 (1) Gerontology Research Programme, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore-Singapore; (2) Geriatric Education and Research Institute-Singapore

Malnutrition and physical frailty are distinct geriatric syndromes present in a majority of elderly persons in the nursing home, hospital, primary care, and community settings. It is more than co- incidental that they are often found together in the same individual, since they share many common pathophysiological pathways. Malnutrition, resulting from age-related changes, and frailty, pertaining to age-related risk and demand, is arguably the major cause of muscle wasting and physical frailty, among other causes such as physical inactivity, hormonal and metabolic changes, and chronic and/or secondary health problems. There is increasing evidence to support the role of calorie and protein deficiency in the development and aggravation of physical frailty. Current evidence suggests that older persons should achieve energy intake above 25 kcal/kg/day and protein intake of 1.0 to 1.2 g/kg-BW (higher than the RDA for young adults of 0.8g/kg-BW) evenly distributed over 3 meals on a daily basis. Nutritional screening and intervention guidelines have shown that frailty among community-living older persons is reversible by nutritional, physical, and cognitive interventions. One-year increase in residential greenness had lower level of frailty. Living in highest vs the lowest quartile of greenness is equivalent to 6.5 years of aging. These findings suggest that environmental exposure to greenness may be a determinant of healthy longevity.

S2- MALNUTRITION AND FRAILTY. Shou Liang Wee1,2 (1) Geriatric Education and Research Institute-Singapore; (2) Faculty of Health and Social Sciences, Singapore Institute of Technology-Singapore

Malnutrition and physical frailty are distinct geriatric syndromes present in a majority of elderly persons in the nursing home, hospital, primary care, and community settings. It is more than co- incidental that they are often found together in the same individual, since they share many common pathophysiological pathways. Malnutrition, resulting from age-related changes, and frailty, pertaining to age-related risk and demand, is arguably the major cause of muscle wasting and physical frailty, among other causes such as physical inactivity, hormonal and metabolic changes, and chronic and/or secondary health problems. There is increasing evidence to support the role of calorie and protein deficiency in the development and aggravation of physical frailty. Current evidence suggests that older persons should achieve energy intake above 25 kcal/kg/day and protein intake of 1.0 to 1.2 g/kg-BW (higher than the RDA for young adults of 0.8g/kg-BW) evenly distributed over 3 meals on a daily basis. Nutritional screening and intervention guidelines have shown that frailty among community-living older persons is reversible by nutritional, physical, and cognitive interventions. One-year increase in residential greenness had lower level of frailty. Living in highest vs the lowest quartile of greenness is equivalent to 6.5 years of aging. These findings suggest that environmental exposure to greenness may be a determinant of healthy longevity.
In order to better understand the prevalence of frailty among Chinese elderly, a multi-center clinical study in 10 hospitals across 6 provinces named China Frailty and sarcopenia Trial (China FAST) was conducted from July 2018, led by the Geriatric Department of Peking Union Medical College Hospital. The study will recruit people over 60 years old who are potentially suffering from frailty or sarcopenia, offering them specific nutrition supplement and exercises as intervention. Although this study will be ongoing at the time of the conference, the study design and international references could be discussed with us. We believe the outcomes of this study will help us to better understand the awareness and introduce similar studies in more regions of China.

Communication 3: Clinical and Home Intervention Models for Frail Elderly in China, Ninie Yan Wang (Pinetree Care Group, Beijing, China)

Physical exercises and nutritional support have been recommended by a number of international studies as intervention for geriatric frailty. The process of standardized assessment, care plan as well as continuous follow-up provides the opportunity to identify and reverse the course of frailty development among large number of ageing Chinese citizens. A nested prospective cohort study among senior citizens in urban districts of Beijing from 2013 to 2016 showed an association between clinical-home intervention and the development of frailty status.

Oral Communications

OC1. COMPARISON OF SIX FRAILTY SCREENING INSTRUMENTS AMONG INSTITUTIONALIZED OLDER ADULTS IN CHINA, TX, SI, CL. Wang', YR. Jin', XY. Tian', F. Li', JF. Wu, NY. Liu*, 1 (1) School of Nursing, Shanxi University, Jinan, 250012, Jinan, China; (2) School of Nursing, Peking University, 100039, Beijing, China.

Backgrounds: Institutionalized elders are more likely to be frail, but few research focuses on frailty screening tools among institutionalized elders. To test the diagnostic criteria and the diagnostic test accuracy (DTA) of 6 frailty instruments and their abilities to predict concurrent adverse outcomes among institutionalized older adults. Methods: Cross-sectional survey was performed among 201 institutionalized adults aged 60 years or older. Frailty was defined by the FRAIL (fatigue, resistance, ambulation, illnesses, and loss of weight), the Fried Frailty Phenotype (Fried), the Study of Osteoporotic Fracture (SOF), Tilburg Frailty Indicator (TFI), and Assessment of community health status (ACA). The Comprehensive Geriatric Assessment (CGA) was used as “gold standard” of frailty. Data on concurrent adverse outcomes including institutionalization, physical, cognitive decline, hospitalization, and death were collected. The receiver operator characteristics curve (ROC) analysis and logistic regression model were conducted to examine and compare support CGA and DTA and predictive validity of 6 frailty screening instruments, respectively. Results: Prevalence of frailty ranged from 16.5% (SOF) to 76.8% (TFI) among institutionalized older adults. Prevalence of multimorbidity (≥4) was 99.2% and 75% for FRAIL and Fried respectively. The Comprehensive Geriatric Assessment (CGA) was used as “gold standard” of frailty. Data on concurrent adverse outcomes including institutionalization, physical, cognitive decline, hospitalization, and death were collected. The receiver operator characteristics curve (ROC) analysis and logistic regression model were conducted to examine and compare support CGA and DTA and predictive validity of 6 frailty screening instruments, respectively. Results: Prevalence of frailty ranged from 16.5% (SOF) to 76.8% (TFI) among institutionalized older adults. Prevalence of multimorbidity (≥4) was 99.2% and 75% for FRAIL and Fried respectively.

OC2. DEFINITIONS MATTER: DISENTANGLING THE COMPLEX RELATIONSHIP BETWEEN MUSCLE MASS AND FRAILTY. M. Clasen 1, A. Arvand 2, C. Dorey 2, E. Clasen 3, G. W. G. Wun 4, Y. Y. Ding 5, 1 (1) Department of Geriatric Medicine, Tan Tock Seng Hospital, Singapore; 2 (2) Institute of Geriatrics and Active Ageing, Tan Tock Seng Hospital. Singapore; (3) Department of General Medicine (Geriatric Medicine), Sengkang Hospital, Singapore; (4) Department of Continuing and Community Care, Tan Tock Seng Hospital, Singapore; (5) Department of Radiological Medicine, Tan Tock Seng Hospital, Singapore.

Background: Sarcopenia and frailty are inter-related geriatric syndromes with deleterious consequences. Although low muscle mass is associated with frailty manifestations in the majority of studies, it is unclear whether low muscle strength and body composition in an Asian population. Methods: We studied 200 community-dwelling older adults from the GeriLABS cohort study. We compared three widely-employed DXA-based definitions of muscle mass: appendicular lean mass (ALM) adjusted for height squared (ALM/H2), adjusted for BMI (ALM/BMI) and residuals of linear regression on ALM adjusted for fat mass and height (ALM-res). Frailty phenotype (robust, pre-frail and frail) was defined according to the Fried Criteria. We investigated the relationship between different muscle mass definitions with frailty status, we performed descriptive statistics and scatterplot with Lowess smoothing, followed by multinomial logistic regression, adjusting for relevant co-variates, were run with outcomes “no disability”, “1 disability” and “3+ disability.” Results: Muscle mass definitions were strongly related to frailty (ALM/H2: 0.40, ALM/BMI: 0.39 and ALM-res: 0.44) and residuals of linear regression on ALM adjusted for fat mass and height (ALM-res): 0.44 for ALM/H2, but not ALM/BMI or ALM-res. In multinomial logistic regression, each unit increase in ALM/H2 was associated with 41% (95%CI: 9%-90%, p=0.034) lower odds of being frail as opposed to robust, ALM/BMI and ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment.

OC3. STROKE AND DISABILITY IN ELDERLY CHINESE: A NATIONAL POPULATION-BASED STUDY. X. ZHANG, W.S. LIM 1,2, L. TAY 3, A. YEO 2, S. YEW 2. 1 Communication 1: Stroke and chronic disease status in the elderly: A population-based study in urban and rural areas. Methods: We used Chinese Longitudinal Healthy Longevity Survey (CLHLS) 2013-14 data (N=2633) to produce population-weighted estimates of disability using the ADL (range: 0-12) and the IADL scales (range: 0-16), for Chinese elderly (age 65 and older) stroke survivors compared to those with non-stroke chronic diseases and those with no chronic disease (2 groups). Multiple logistic regressions, adjusting for relevant co-variates, were run with outcomes “no disability”, “1 disability only” and “3+ disability.” Results: Muscle mass definitions were strongly related to frailty (ALM/H2: 0.40, ALM/BMI: 0.39 and ALM-res: 0.44) and residuals of linear regression on ALM adjusted for fat mass and height (ALM-res): 0.44 for ALM/H2, but not ALM/BMI or ALM-res. In multinomial logistic regression, each unit increase in ALM/H2 was associated with 41% (95%CI: 9%-90%, p=0.034) lower odds of being frail as opposed to robust, ALM/BMI and ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment.

Background: Stroke is a major cause of disability, responsible for the third most disability adjusted life years globally, and a recently published analysis of a nationally representative survey estimated the age-advanced prevalence of stroke in China was 1.114,8 per 100,000 people. Within China, the environments faced by those in rural and urban areas are vastly different. Approximately 44% of the Chinese population lives in rural areas. However, the urban-rural divide in China may be unique in some ways, and studies there have shown positive associations between rural residence and functional ability and other health measures. Disability is commonly measured using the disability of basic and instrumental activities of daily living (ADL and IADL), scales of elderly who self-reported suffering a stroke using a data sample of a representative sample of 22 provinces in the China Longitudinal Healthy Longevity Survey. We compared them to their peers who reported suffering from non-stroke chronic diseases. Besides, we provide detailed analyses of the disability profiles of the urban and rural elderly Chinese population, and assess whether the association between stroke and disability was modified by urban/rural residence. Objectives: This study sought to quantify the prevalence of disability burden in elderly stroke survivors in rural and urban areas. Methods: We used Chinese Longitudinal Healthy Longevity Survey (CLHLS) 2013-14 data (N=2633) to produce population-weighted estimates of disability using the ADL (range: 0-12) and the IADL scales (range: 0-16), for Chinese elderly (age 65 and older) stroke survivors compared to those with non-stroke chronic diseases and those with no chronic disease (2 groups). Multinomial logistic regressions, adjusting for relevant co-variates, were run with outcomes “no disability”, “1 disability only” and “3+ disability.” Results: Muscle mass definitions were strongly related to frailty (ALM/H2: 0.40, ALM/BMI: 0.39 and ALM-res: 0.44) and residuals of linear regression on ALM adjusted for fat mass and height (ALM-res): 0.44 for ALM/H2, but not ALM/BMI or ALM-res. In multinomial logistic regression, each unit increase in ALM/H2 was associated with 41% (95%CI: 9%-90%, p=0.034) lower odds of being frail as opposed to robust, ALM/BMI and ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment. Conclusion: Our results identified ALM/H2 but not ALM/BMI or ALM-res were not associated with pre-frail/frailty after adjustment.
OC4- FRAILTY CORRELATES WITH A HIGHER RISK OF MORTALITY AMONG INCIDENT TYPE 2 DIABETIC PATIENTS: A POPULATION-BASED STUDY. C. Chao, Jenq-Hung Wang (National Taiwan University Hospital, Taipei, Taiwan)

Background: Diabetes mellitus (DM) is associated with accelerated aging and increased risk of frailty in patients with type 2 DM (T2DM). We aimed to examine the relationship between frailty severity, mortality, and healthcare resource utilization, using a large diabetic population. Methods: From the 840,000 DM patients aged ≥60 years old between 2004 and 2010, we identified 560,705 with incident type 2 DM (T2DM), categorized into those without, with 1, 2, or ≥3 types of frailty components using administrative data of diagnostic and intervention codes, based on the FRAIL (Fatigue, Resistance, Ambulation, Illness, and Loss of body weight). We examined the long-term (11-year) impact of frailty categories on healthcare utilization and costs. Results: Frailty severity was dose-dependently associated with a higher risk of mortality (HR=3.07, 1.66-5.70) and hospitalization (OR=93.6, 17.9-489.9). Additionally, frailty severity was associated with both cognitive impairment (CI) and physical frailty (PF). CI was elevated for PF alone (2.24, 1.16-4.34) and for PF with CI (2.01, 1.02-3.94) compared to non-frailty, and CI alone was not associated with PF (1.58, 1.02-2.43) or with non-CI PW (1.33, 0.89-2.01). The results lend support to the concept that frailty has both physical and cognitive dimensions and are targeted to domain-specific and multiple domain interventions.

OC5- THE STUDY OF THE RELATIONSHIP BETWEEN CORONARY HEART DISEASE AND SARCOPENIA IN THE ELDERLY. Wang Xiting, Liu Meilin (Department of Geriatrics, Peking University First Hospital, Beijing, China)

Objectives: Atherosclerotic cardiovascular disease (ASCVD) is an independent risk factor for death and disability in the elderly. Frailty is a geriatric syndrome characterized by the decline in the function of multiple systems with age. The reduction of skeletal muscle mass and/or muscle strength is known as sarcopenia, which is an independent risk factor of ASCVD in the elderly, and will aggravate the frailty further. Therefore, it is necessary to find effective preventive measures to reduce the incidence of death and disability in the elderly. We aimed to explore the relationships between the presence of frailty and sarcopenia and the incidence of death and disability in the elderly. Methods: The elderly patients with CHD who were hospitalized in the Peking University First Hospital (n=311) were included in the study, the clinical data was collected. The patients were divided into sarcopenia and non-sarcopenia group. We analyzed the respective difference on general clinical data, the physical and chemical index, body composition and the index of cardiac structure and function between the two groups. Results: 1. The prevalence of sarcopenia in elderly patients with CHD was 26.69% (male 25.10% vs female 34.62%), and increased with age. 2. Under the condition of CHD, the patients in sarcopenia group had significantly lower in sarcopenia group (P<0.05). 4. The left atrial diameter, left ventricular diastolic diameter and the BNP levels were lower in sarcopenia group (P<0.05). 5. The left ventricular mass index was significantly higher and the average exercise capacity and Bertiil index scores were significantly lower in sarcopenia group (P<0.05). Conclusions: Elderly patients with CHD are more likely to suffer from sarcopenia. Under the condition of CHD, the patients in sarcopenia group had significantly lower in sarcopenia group (P<0.05). The left ventricular mass index was significantly higher and the average exercise capacity and Bertiil index scores were significantly lower in sarcopenia group (P<0.05). The results lend support to the concept that frailty has both physical and cognitive dimensions and are targeted to domain-specific and multiple domain interventions. A higher risk of adverse outcomes. Biomarkers may help identify older adults who are at risk of becoming or being frail. Although studies have reported that low-grade inflammation and adipokines secreted by fat tissue are associated with frailty, there is still a lack of studies on biological markers for frailty in Chinese elderly. Objectives: To explore the impact of low-grade chronic inflammation and adipokines on frailty and their association with physical function in older individuals. Methods: 130 older adults aged 72.80±8.61 years were divided into two groups: Frail group (n=65) and Non-frail group (n=65). We measured inflammatory markers, low-grade chronic inflammation and adipokines secreted by fat tissue, and their association with physical function in older individuals. Results: Higher levels of IL-6 ([0.71±0.28] pg/ml vs [0.58±0.22] pg/ml, P=0.12) and C-reactive protein ([4.76±3.45] mg/dl vs [3.89±3.45] mg/dl, P=0.08) were associated with frailty. In addition, the frail group had a lower level of adiponectin ([5.35±3.83] mg/dl vs [6.57±3.81] mg/dl, P=0.01) and increased with age. Conclusions: Higher levels of IL-6 and lower levels of adiponectin were associated with frailty in older Chinese adults. Circulating inflammatory markers might be potential biomarkers for frailty in older Chinese adults. Further studies are needed to explore the relationship between circulating inflammatory markers and frailty.
gait speed (r = -0.19, p = 0.03). Conclusion: We showed for the first time an association between frailty and cognitive function with frailty and physical function decline in Chinese older adults. These preliminary findings suggest that both inflammatory cytokines and adipokines might be potential biomarkers for frailty. Longitudinal studies are needed to evaluate the causal relationship between inflammation, adipokines and frailty, as well as their predictive role in the onset of frailty or pre-frailty in old individuals.

OC11- HIGH VITAMIN D LEVEL IS ASSOCIATED WITH LESSER FRAILTY AND COGNITIVE DECLINE IN SUBJECTS WITH SUBJECTIVE MEMORY COMPLAINT: RESULTS FROM CROSS-SECTIONAL STUDY OF THE MAPI TRIAL, J.K. Chhetri1, G. Soriano2, I. Gennero3, C. Cantet4, B. Vellas5 (1) Gérontopôle, Department of Geriatrics, CHU Toulouse, Purpan University Hospital, Toulouse, France; (2) Department of Geriatrics, Kaohsiung Medical University, Kaohsiung, Taiwan; (3) Gérontopôle, Department of Geriatrics, CHU Toulouse, Purpan University Hospital, Toulouse, France; (4) Gérontopôle, Department of Geriatrics, CHU Toulouse, Purpan University Hospital, Toulouse, France; (5) Gérontopôle, Department of Geriatrics, CHU Toulouse, Purpan University Hospital, Toulouse, France; (6) Gérontopôle, Department of Geriatrics, CHU Toulouse, Purpan University Hospital, Toulouse, France)

Backgrounds: Older individuals are known to have decreased physical and cognitive functions, making them vulnerable to a myriad of geriatric syndromes, is characterized by a progressive decline in muscle mass index and strength that occurs with aging, and is a major cause of disability and frailty in the elderly. Objectives: To investigate the relationship between frailty and cognitive impairment among community-dwelling older adults. Methods: A retirement community, located in north Taiwan, is a home for healthy retired aged individuals who are 65 years old and older. A cross-sectional study was performed from 2014 to 2016 at a healthy retirement community. A cross-sectional survey from 2014 was carried out and reported. There were 489 subjects enrolled in our study, and data from all 305 were eligible for analysis. In this study, blood samples were collected from enrolled residents of a retirement community with consent for hematological, biochemical and metabolomics study. Besides blood samples, measurements of the hand grip, walking speed, and muscle mass of the subjects were also taken yearly for consecutive three years. Results: We divided the female and male participants into 4 groups each according to the quartiles of their muscle mass index. For each gender, we defined quartile 1 as the control group and quartile 4 as the sarcopenia group. Among the females, the values of total amino acids, including essential and non-essential amino acids, were significantly lowered in the sarcopenia group. Multivariable-stepwise adjustment, glutamate level significantly changed in sarcopenia group. Among the males, the values of total amino acids, including essential and non-essential amino acids in female and male are still in need of further investigation.

OC13- A STUDY ON THE RELATIONSHIP BETWEEN FRAILTY AND THE INDEX OF AtherosclerOsis, Xi Xue, Yun Wang (Beijing Tong Ren Hospital, Capital Medical University, Beijing, China)

Background: The incidences of frailty and atherosclerosis are increased in healthy aging. Recent studies demonstrated that they have common pathogenesis. Frailty may be associated with the arterial stiffness. Objectives: To investigate whether the index of atherosclerosis, the lumbar spinal cord of 18-month-old cKO mice. Results: Sarcopenia, which is associated with age-related geriatric syndrome, is characterized by a progressive decline in muscle mass index and strength that occurs with aging, and is a major cause of disability and frailty in the elderly. Objectives: To investigate the relationship between sarcopenia and frailty. Methods: A retirement community, located in north Taiwan, is a home for healthy retired aged individuals who are 65 years old and older. A cross-sectional survey from 2014 was carried out and reported. There were 489 subjects enrolled in our study, and data from all 305 were eligible for analysis. In this study, blood samples were collected from enrolled residents of a retirement community with consent for hematological, biochemical and metabolomics study. Besides blood samples, measurements of the hand grip, walking speed, and muscle mass of the subjects were also taken yearly for consecutive three years. Results: We divided the female and male participants into 4 groups each according to the quartiles of their muscle mass index. For each gender, we defined quartile 1 as the control group and quartile 4 as the sarcopenia group. Among the females, the values of total amino acids, including essential and non-essential amino acids, were significantly lowered in the sarcopenia group. Multivariable-stepwise adjustment, glutamate level significantly changed in sarcopenia group. Among the males, the values of total amino acids, including essential and non-essential amino acids in female and male are still in need of further investigation.

Conclusion: In frail and pre-frail individuals, sarcopenia is associated with increased oxidative stress and reduced levels of IL-6 and TNF-α. Glutamate and S100B levels were significantly lower in sarcopenia group. Among the females, the values of total amino acids, including essential and non-essential amino acids, were significantly lowered in sarcopenia group. Multivariable-stepwise adjustment, glutamate level significantly changed in sarcopenia group. Among the males, the values of total amino acids, including essential and non-essential amino acids in female and male are still in need of further investigation.

Conclusion: We showed for the first time an association between frailty and cognitive function with frailty and physical function decline in Chinese older adults. These preliminary findings suggest that both inflammatory cytokines and adipokines might be potential biomarkers for frailty. Longitudinal studies are needed to evaluate the causal relationship between inflammation, adipokines and frailty, as well as their predictive role in the onset of frailty or pre-frailty in old individuals.
COMMUNITY-BASED FUNCTIONAL POWER TRAINING FOR FRAILTY REDUCTION: A RANDOMIZED CONTROLLED TRIAL

Background: Frailty and functional decline is common in older people. In spite of that, community-based programs can increase and sustain physical activity participation to maintain health and functional status. However, implementation in the family setting is challenging. As muscular power deteriorates earlier and faster than muscle strength and gait speed, the strength of these frailty phenotype components is of particular interest.

Methods: In total, 120 participants (aged 65±7 years) were randomly assigned to either the intervention arm (n=60) or the control arm (n=60). The intervention group undertook a 12-week structured exercise program, including aerobic, resistance, and balance exercises. The control group continued their usual activities. Outcome measures included muscle function (by calf circumference (mass), knee extension test (strength) and short physical performance battery (SPPB)), and median gait speed in a 6-meter test. Functional performance was assessed using the timed up and go test (TUG), the 15-meter walk test (15mWT), and the 30-second chair stand test (30sCST). Analysis of repeated measures was used to compare changes between groups.

Results: Participants in the intervention group showed significant improvements in muscle mass, muscle strength, and gait speed compared to the control group. Intervention participants significantly increased muscle mass by 2.0%, muscle strength by 1.3%, and median gait speed by 0.22 seconds. In contrast, muscle mass, muscle strength, and gait speed in the control group remained unchanged. Significant differences were observed between groups, with p-values ranging from 0.001 to 0.049. The effect sizes for the intervention were large for muscle mass (ES = 0.8), moderate for muscle strength (ES = 0.5), and small for median gait speed (ES = 0.2). The results indicate that community-based functional power training can significantly improve muscle function and gait speed in older adults.

Conclusion: Community-based functional power training can effectively improve muscle function and gait speed in older adults. Further research is needed to explore the long-term effects and sustainability of this intervention.

OUTCOMES OF FRAIL ELDERS ATTENDING THE GERIATRIC DAY HOSPITAL (GDH) PROGRAMME: A RETROSPECTIVE AUDIT

Background: The frailty phenotype is a rapidly aging society, emphasizing the importance of early intervention to prevent the onset of frailty.

Methods: This was a retrospective study of frailty-related data from 88 patients (78±6 years) who attended the GDH from January to June 2017. The frailty phenotype was assessed using the Clinical Frailty Scale (CFS) and the Frailty Index (FI). Multivariable analyses controlled for demographic, medical, and functional factors. Agreement between raters, and with standard CFS, was determined using the kappa statistic. ROC curve analysis was used to evaluate the predictive performance of CFS-A against standard CFS.

Results: The prevalence of frailty was 98.86% (62 individuals). Multivariable analyses controlled for demographic, medical, and functional factors. Agreement between raters, and with standard CFS, was determined using the kappa statistic. ROC curve analysis was used to evaluate the predictive performance of CFS-A against standard CFS.

Conclusion: The audit suggests that rehabilitation at GDH is effective for frail elderly although more supporting evidence is needed to substantiate this. The setup of GDH allows for regular assessments to detect changes in medical conditions and needs, making timely modifications of interventions possible to achieve the best functional outcomes.
Comparing frail and clinical frailty scale in predicting risk of readmission in elderly patients receiving an unplanned hospital admission. Xin Yi Choo1, Ho Peying Esther1, Baldevarana Jeff Lalbroo2, Chong Kuk Edwin Edward3 (1) KRP (Singapore); Tan Tock Seng Hospital, Singapore; (2) MBBS (The University of Sydney), Tan Tock Seng Hospital, Singapore; (3) M.D. (Philippines); Dip Geriatric Medicine and level in VAS (University of Hong Kong, HK SAR, China). Wai Chung Clara, Li Lei (Associate Professor School of Chinese Medicine, The University of Hong Kong, Hong Kong SAR, China)

Objective: To cope with the rising demand of older patients, it is important to provide some information for setting up prevention over medical treatment of the senior medical service policy. Objectives: To find out usability of this physical activity through not only finding out of the independency of effect and also analyzing of motions of 'Yang-Saeng Contents' which is a physical activity program for the old and is very useful and effective for improvement of physical and cognitive function of the old in Korea. Methods: The method of study tries to present the effect of each motion of this exercise research in books and documents with scientific basis. Data was presented with basis as this research collected academic thesis of Korea and thesis from SCI (Science direct, web of science). Results: Motions of 'Yang-Saeng Contents' that is based on 'Hwaishimbang' consists of various methods such as a movement of neck movement, neck movement and masticatory muscle exercise, tongue movement, swallowing spits, pulling ear, moving of thoracolumbar spine. In the examination, with the help of Z-test, a statistical test of SMDP was performed. Through these results, Korean adult responses to the SMDP was effective as for improvement of body function.

The impact on caregivers by applying yoga and acupressure on frail older adults living in the community dwellings. Chuan Chai Chong Clara, Li Lei (Associate Professor School of Chinese Medicine, The University of Hong Kong, Hong Kong SAR, China) 

Objectives: The independent association between frailty and adverse outcomes of interest was analyzed using logistic regression. Mortality was taken as an adverse outcome. Results: Frailty prevalence was 50% (FRAIL) and 51% (CFS). At 12 months, frail (FRAIL) individuals was significantly associated with mortality (79.0% vs 63.4%, p<0.013) and institutionalization (46.7% vs 18.8%, p<0.001) compared to robust patients. Both tools were significantly associated with mortality (FRAIL, 41.0% vs 13.3%, p<0.001; CFS: 32.9% vs 2.5%, p<0.001). Adjusting for age, gender, and severity of illness, both tools were associated with mortality (FRAIL: OR 2.356, 95% CI 1.37-3.97, p<0.001; CFS: OR 1.90, 95% CI 1.46-2.43, p=0.001), and institutionalization at 12 months (FRAIL: 0.40, 95% CI 0.22-0.73, p=0.006; CFS: 0.25, 95% CI 0.11-0.57, p=0.001). CFS conferred higher risk for mortality (FRAIL: OR 1.53, 95% CI 1.01-2.31, p=0.044; OR 3.69, 95% CI 2.31-5.88, p<0.001; FRAIL: CFS: 2.35, 95% CI 1.63-3.44, p<0.001). Conclusion: Both tools are predictive of adverse outcomes across all categories of caregivers. The caregivers identified the need for education in the knowledge of care, and improving relationship with care-receivers as the key contributor to their reduction of stress. Conclusion: Caregivers’ stress level could be reduced when they were properly trained to perform acupressure protocol designed to improve the quality of life of frail older adults.

A CASE STUDY ON THE APPLYING OF SENIOR ADAPTED MODERN DANCE PROGRAM IN THE COMMUNITY EDUCATION PROGRAM. Hyokyoung Park1, Yanghee Cho2, Wonchung Chung3, Chang Bum Park3 (1) Yonsei University; (2) Ewha University; (3) SungAng University)

Background: South Korea has recently entered the aging society, and various welfare services and programs for the elderly are being provided. Besides the national welfare support, other organizations’ social welfare service also run senior programs for social contribution, recreation, and social seniors. However, there are few senior education programs. These school programs offer lunches, club activities, and so on programs offer total 12 sessions for 4 hours. The purpose of this program was provided by a religious senior education service, it should be a meaningful activity for the senior in addition to simply having fun and spending leisure time. Physical activities may be especially useful considering the reduction and development of physical function due to healthy aging. Objectives: The purpose of this study is to verify a program feasibility applying a very heterogeneous physical activity program for community senior education program. To increase senior fitness is the most important factors of the healthy aging. In this study, the purpose of this study is to find out usability of this physical activity through not only finding out of the independency of effect and also analyzing of motions of ‘Yang-Saeng Contents’ which is a physical activity program for the old and is very useful and effective for improvement of physical and cognitive function of the old in Korea. Methods: The method of study tries to present the effect of each motion of this exercise research in books and documents with scientific basis. Data was presented with basis as this research collected academic thesis of Korea and thesis from SCI (Science direct, web of science). Results: Motions of ‘Yang-Saeng Contents’ that is based on ‘Hwaishimbang’ consists of various methods such as a movement of neck movement, neck movement and masticatory muscle exercise, tongue movement, swallowing spits, pulling ear, moving of thoracolumbar spine. In the examination, with the help of Z-test, a statistical test of SMDP was performed. Through these results, Korean adult responses to the SMDP was effective as for improvement of body function.

Korean adult and senior aging relation of health condition, health cognition, and satisfaction of national and community medical services. Won-Chung Chung1, Do-Yeon Kim 2, Hyo Won Song2, Won昌庆 Chung1, Jin-won Kim1, Sang-hye Lee2, Moon-mi Jung2, Sue-yeon Kim1 (1) Yonsei University; (2) SungAng University)

Background: ‘Yang-Saeng Contents Exercise’ is based on method of training for healthy mind and body of Toegye Yi-Hwang who is scholar of Chosun Dynasty in 500 years ago. It is to find out usability of this physical activity through not only finding out of the independency of effect and also analyzing of motions of ‘Yang-Saeng Contents’ which is a physical activity program for the old and is very useful and effective for improvement of physical and cognitive function of the old in Korea. Methods: The method of study tries to present the effect of each motion of this exercise research in books and documents with scientific basis. Data was presented with basis as this research collected academic thesis of Korea and thesis from SCI (Science direct, web of science). Results: Motions of ‘Yang-Saeng Contents’ that is based on ‘Hwaishimbang’ consists of various methods such as a movement of neck movement, neck movement and masticatory muscle exercise, tongue movement, swallowing spits, pulling ear, moving of thoracolumbar spine. In the examination, with the help of Z-test, a statistical test of SMDP was performed. Through these results, Korean adult responses to the SMDP was effective as for improvement of body function.

Evaluating the impact of community-based physical activity program on quality of life in community dwelling elderly. Huai Hui1, Ming-Ying Huang1, Hu, Bing-Hui Huang2, Yi-Chang Huang3, Hsiao-Hui Nieh4, Shi Jun Pan1(1) (1) Yang Sheng Foundation, Taipei, Taiwan; (2) (3) Tang-Ming Medical Center; (4) Jen Catholic University, Taipei, Taiwan)

Background: Attention to the sustainability of health intervention programs for older adults is increasing, but data is limited with progressive learning design and after program follow-up. Objectives: To evaluate the long-term effects of this community-based program, Self-Healing Enhancement Program (SEP), of community-dwelling adults aged 60 years and older in Taiwan. Methods: SEP is a community-based intermediate to senior level, which includes the conceptual and operational definitions of the self-healing concepts with integrated activities of exercises, relaxation training, and cognitive reframing. Results: Significant progress, team support, empowerment, self-efficiency, mindfulness, sitting meditation, breathing techniques and social elements flexible to the individual participant. The assessment of daily living or physical activities were excluded for the study. All subjects received assessment for anthropometric measurements, HRQOL, and quality of life in self-report. Conclusions: Participants were involved in the program for a 12-month follow after the interventions. Demographic characteristics, health behavior, living arrangement, marital status, underlying chronic conditions, and medications in use were collected for a 15-month follow up. Results: 160 participants (mean age: 71.9 ± 9 years) joined SEP in the beginning, with 106 participants completed the SEP three levels, and only 73 completed continuous 6-month follow up due to scheduling.
VALIDITY OF A NEW FRAIL SCALE IN A COMMUNITY DWELLING JAPANESE ELDERLY: EVIDENCE FROM TOSHIMA FRIED STUDY

S14

Aim: The new FRAIL scale can be developed as a valid and convenient tool for frailty assessment in community-dwelling elderly people.

Methods: A total of 146 community-dwelling Japanese older adults aged 60 years and above participated in the TOSHIMA FRIED study. The new FRAIL scale was validated with participants' data collected from 2011 to 2012.

Results: The new FRAIL scale correlated significantly with BMI, grip strength, 5 meters walk time, one-leg stand time and chair stand time, MVPA, and the MMSE. The new FRAIL scale was further validated against the concurrent validity of the new FRAIL scale. The 5 individual domains of the new FRAIL scale correlated significantly with the MMSE and MoCA, which are widely used to assess cognitive function among older Chinese diabetic adults. Methods: The 146 participants with type 2 diabetes were recruited consecutively between January 2011 and January 2012 from the Center of Gerontology and Geriatrics, West China Hospital. Statin use and other medical factors were analyzed using the Friedman test. The Jei scale was used to evaluate fracture risk.

Conclusion: The new FRAIL scale can be used as a valid tool to assess frailty in community-dwelling older adults.

ASSOCIATION BETWEEN STATIN USE AND PHYSICAL FUNCTION AMONG OLDER CHINESE INPATIENTS WITH TYPE 2 DIABETES, Ying Li (The Center of Gerontology and Geriatrics, West China Hospital, Sichuan University, Chengdu, China)

Background: Statin use is common in older patients with type 2 diabetes. Statin-associated muscle symptoms (SAMS) are the muscle-related side-effects of statins which may cause muscle weakness and pain. This study aimed to evaluate the association between statin use and physical function among older Chinese diabetic adults.

Methods: The 146 participants with type 2 diabetes who took part in this study were recruited between January 2011 and January 2012 from the Center of Gerontology and Geriatrics, West China Hospital. Statin use and other medical factors were analyzed using the Friedman test. The Jei scale was used to evaluate fracture risk.

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status was evaluated according to MNA-SF. The comorbid condition was assessed by IADL test. Medication was defined as the use of four or more medications by a patient. The estimated glomerular filtration rate (eGFR) was calculated by CKD-EPI formula. Results: A total of 101 inpatients were divided into non-frail group (N=31, 31.7%), pre-frail group (N=46, 45.5%) and frail group (N=23, 22.8%). There are no differences in age (P=0.905), sex (P=0.408), poly-pharmacy (P=0.660), CCI (P=0.179), hemoglobin (P=0.140), CHOL (P=0.397), TG (P=0.440), HDL-C (P=0.234), LDL-C (P=0.658), albumin (P=0.178) and eGFR (P=0.886). Pre-frailty was defined as a 1-point deflection in non-frail group, 11.4±2.19 in pre-frail group, 10.04±3.01 in frail group (P=0.023). Conclusions: Frailty has a high prevalence in elderly inpatients and it is related with malnutrition.

THE ANALYSIS OF ACTIVITIES OF DAILY LIVING IN FRAIL AND PRE-FRAIL OLD PATIENTS, Wei Huang, Ting Sun, Zee-Lan Lu, Qiang Ding, Ling Chen, (Department of Geriatrics, Xuanwu Hospital, Capital Medical University, Beijing, China)

Background: Frailty was very common in old patients. Activities of daily living was risk factor about mortality in the old people. Less studies were about the frailty and activities of daily living in China. Aim: The aim of the present study was to investigate the Katz Activities of Daily living scale (Katz ADLs) and Lawton Instrumental Activities of Daily living scale (Lawton IADLs) in frail and pre-frail old patients. Methods: From July 2017 to January 2018, 89 old patients were enrolled, who all finished the geriatric comprehensive assessment. The patients were divided into non-frail group and pre-frail/frail group (59/20/6, 66.3%). According to the Katz ADLs, all patients were divided into independent group and function impairment group. According to the Lawton IADLs, all patients were divided into independent and fragment function group. According to the Beijing Longitudinal Study of Aging, the clinical key projects of residents who had developed new contractures after 5 years was 13.3% for upper limbs and 26.5% for lower limbs, while the proportion of residents who had developed new contractures among 3 groups. Mini-nutrition assessment was 12.29±3.21 in non-frail group, 11.43±2.19 in pre-frail group, 10.04±3.01 in frail group (P=0.023). Conclusions: A total of 101 inpatients were divided into non-frail group (N=31, 31.7%), pre-frail group (N=46, 45.5%) and frail group (N=23, 22.8%). There are no differences in age (P=0.905), sex (P=0.408), poly-pharmacy (P=0.660), CCI (P=0.179), hemoglobin (P=0.140), CHOL (P=0.397), TG (P=0.440), HDL-C (P=0.234), LDL-C (P=0.658), albumin (P=0.178) and eGFR (P=0.886). Pre-frailty was defined as a 1-point deflection in non-frail group, 11.4±2.19 in pre-frail group, 10.04±3.01 in frail group (P=0.023). Conclusions: Frailty has a high prevalence in elderly inpatients and it is related with malnutrition.

CONTRACTURES AMONGST LONG-TERM CARE POPULATION, Li Chen, Zhe Tang, Fei Sun, Lijun Diao, Lin Ma (Department of Geriatrics, Xuanwu Hospital, Capital Medical University, Beijing, China)

Results: There were no significant differences in age and gender between non-frail group and pre-frail/frail group. A total of 101 inpatients were divided into non-frail group (N=31, 31.7%), pre-frail group (N=46, 45.5%) and frail group (N=23, 22.8%). Pre-frailty was defined as a 1-point deflection in non-frail group, 11.4±2.19 in pre-frail group, 10.04±3.01 in frail group (P=0.023). Conclusions: Frailty has a high prevalence in elderly inpatients and it is related with malnutrition.

PREVALENCES AND PREDICTION OF LIMB CONTRACTURES AMONGST LONG-TERM CARE RESIDENTS, Li Chen, Zhe Tang, Fei Sun, Lijun Diao, Lin Ma (Department of Geriatrics, Xuanwu Hospital, Capital Medical University, Beijing, China)

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in the elderly, there is an association between oral health status and cognitive decline.

Objective: The purpose of this study is to conduct a review of longitudinal studies examining the association between oral health status and cognitive status, with a focus on frailty.

Methods: A systematic review was conducted using relevant English language publications in PubMed/Medline using relevant MeSH terms and title/abstract keywords, and from CoNLAH using relevant subject headings. After applying eligibility criteria and adding studies identified from article references, 16 longitudinal studies were included in the review. Among these studies, 11 examined the impact of oral health status on frailty or demographic outcome, five examined the reverse. Sources of information included administrative data, subject evaluations in parent studies, medical and dental records, or self-report data. Most studies focused on subjects whose oral or cognitive status was known, adding the missing piece using standard measures. The oral health information most frequently studied included number of teeth, periodontal and caries problems, and denture use. Cognition was most frequently evaluated using the MMSE, or by determination of dementia. Results: Some studies found that oral health status (number of teeth or number of caries) or the presence of periodontal disease were associated with increased risk of cognitive decline or dementia, while other studies did not find the association. Similarly, cognitive decline was not consistently associated with greater loss of teeth or number of caries. Methodological limitations likely play a major role in explaining the inconsistent findings. Conclusion: It is unclear how or whether oral health and cognitive status are related. Additional research is needed in which there is greater agreement on how oral health and cognitive status are assessed, in order to better examine the linkages between these two health outcomes.

A STUDY ON FRAILTY IN ELDERLY PATIENTS WITH STABLE COPD.

Luo Jia, Huang Wei, Tang Wen, Lu Zelan, Sui Ying, Ma Qing

Background: Frailty is a common and important geriatric syndrome, and the risk of adverse outcomes in frail elderly is higher than that of non-frail elderly people of the same age. Chronic Obstructive Pulmonary Disease (COPD) is the most common chronic respiratory disease and it plays a crucial role in the disease development of elderly COPD patients. Objective: To determine the prevalence of frailty among patients with stable COPD and its adverse outcomes in elderly patients with COPD. Methods: 62 patients, with stable COPD, aged 65 or older, in the department of healthcare centers of our hospital were selected as the research subjects. Frailty was defined by the frailty index of the European minimum dataset of index. The frailty index was measured by the number of geriatric syndromes and the number of reduced physical function, nutrition, cognitive, psychological, geriatrics syndromes, mobility, etc. Conclusion: Frail elderly patients with stable COPD had a higher risk of hospitalization.

APPLICATION OF MOBILE HEALTH TECHNOLOGY FOR HEALTH EDUCATION IN PATIENTS WITH TYPE 2 DIABETES: A SYSTEMATIC REVIEW.

Kang-yao Cheng, Wei-bo Kang, Yan-yan Luo Jia, Huang Wei, Tang Wen, Lu Zelan, Sun Ying

Background: In recent years, mobile health (mHealth) technology is widely popularized in chronic disease management. Health education is a major concern in patients with type 2 diabetes and mHealth could improve it. This paper aims to analyse the current status and development of mHealth technology in health education of type 2 diabetes patients based on literatures. Methods: A systematic review of the current status and development of type 2 diabetes mHealth application was conducted. Searches were performed using Cochrane Library, PubMed, Web Of Science, CNKI, Sinomed, Wanfang, VIP for articles published in English and in Chinese covering a period from January 2018. Results: Through strict quality evaluation that referred to the BRI-MASTARI list, a total of 89 literatures were included. And the mHealth technology was including QQ, Wechat, other APPs, SMS, web and internet. The indexes of the most widely used mHealth applications in health education, and the indexes frequency were all significantly different, and the heterogeneity was obvious, thus descriptive analysis was adopted. Conclusion: The current status and development of mHealth technology in health education could somehow benefit the index of blood glucose, lipometabolism and self-management of type 2 diabetes patients. However, there are problems including lack of scientific theory guidance, lack of multi-disciplinary team cooperation, short of intervention time and stereotyped form etc. Based on the results, researchers and clinicians are proposed to get good at all aspects of mHealth technology in type 2 diabetes and other chronic diseases. Keywords: Mobile health, health education, diabetes, systematic review, health technology.
Background: Self-reported health status and quality of life measurements are being increasingly used in epidemiological research to predict different levels in capacity and detect important changes and transitions in functioning to prevent care dependence. Objectives: The purpose of this study is to evaluate self-rated overall health among healthy individuals by using a new Self-Healing Scale (SHS). Methods: An expert panel consisting of 14 members was convened that included representatives from gerontiology, psychology, philosophy, sport science, nursing, nutritions, physical therapy, occupational therapy, and social work. These representatives discussed the conceptual framework of the SHS and the items needed to be included in it. The items were selected based on their relevance to general health perceptions. The SHS contains 12 items that were then tested in a pilot study. Results: Reliability (internal consistency) of the SHS scale was assessed with the Cronbach alpha coefficient. The internal consistency of the scale was satisfactory (α = 0.923). The intraclass correlation coefficients exceeded 0.8 in all dimensions, suggesting that the SHS represents a reliable and valid self-ratings health indicator for elderly populations. Conclusion: The SHS may be used to monitor health changes over time and to evaluate the effectiveness of different interventions in health promotion programs and predictors of later health outcomes. The results of this study helps in enhancing insight in the complex relationship between functional status and self-rated health in the elderly population, which can be used in cohort studies and general health perceptions.

RESULTS

The difference between the average life expectancy and the healthy life expectancy in Japan is 9 years for men and 12.5 years for women. Since the differences is 3.5 years longer, frailty prevention measures for women are important. Objectives: For women aged 65 years and older, an interprofessional team organized a health literacy promotion program for frailty prevention for about one year, and provided a monthly roundtable discussion, individual consultations, quarterly seminars, and evaluated the effectiveness of the prevention program using self-administered questionnaire surveys. Methods: The survey included demographics and social background, a basic health checklist to evaluate frailty, and HLS-EU-Q47-J to evaluate health literacy. The subjects were divided into an intervention group of 27 individuals (groupA) who participated in the program and a non-intervention group of 27 individuals (groupB) who did not participate. They were compared by a Mann-Whitney U test and a chi-square test (p<0.05). The evaluation was conducted from February 2017 to June 2018, and was approved by the Research Ethics Review Committee of our institution. Results: There were no differences in the mean ages (groupA, 70.4±6.8 years; groupB, 71.5±4.3 years), marriage status, family structure, highest education level, use of mobile phones and the Internet, and quality of life. As for employment income, groupA>groupB (p<0.05). As for evaluation of frailty, there was no difference in the mean total scores of the basic health checklist (groupA, 3.8±3.1; groupB, 3.4±3.3), while for «Do you worry about falling down?», groupA>groupB (p<0.05). As for health literacy, there was no difference in the mean total scores (groupA, 32.7±9.6; groupB, 33.1±12.3) and the proportion of participants who experienced difficulties (groupA, 22.1±20.7%; groupB, 22.6±22.3%). As for «Do you call an ambulance in an emergency?» groupA>groupB (p<0.05). Conclusion: There was no difference in the evaluation of frailty and health literacy between the two groups; hence, participation in the program may not have favorable effects on preventing frailty and promoting health literacy. It was suggested that life review and long-term intervention should be integrated into the future evaluation.

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