SYMPOSIUM ABSTRACT BOOK

Supporting Successful Aging with Proactive Nutrition: A Look at Muscle, Bone & Joint Health

Nestlé Health Science Satellite Symposium

18th International Congress of the European Geriatric Medicine Society (EuGMS)

30 SEP. 2022

12:00-13:30 BST

FOR HEALTHCARE PROFESSIONALS ONLY

Nestlé HealthScience

AGENDA

Introduction and Welcome
CHAIRPERSON

Prof. Pedro Abizanda Soler, MD, PhD. Head of the Geriatrics Department, Complejo Hospitalario Universitario de Albacete, Spain

Robust older adults: insights and actions for healthy aging

Prof. Dr. Pedro Abizanda Soler

Optimizing musculoskeletal health and physical function in older adults: protein and beyond

Prof. Stuart Phillips, PhD, FACSM, FCAHS. Professor & Tier 1 Canada Research Chair Director, Physical Activity Centre of Excellence (PACE), McMaster University. Ontario, Canada

Techniques to assess muscle health and sarcopenia in the clinical setting

Prof. Stany Perkisas, MD, PhD. Professor, Department of Geriatrics, University of Antwerp, Belgium

A proactive and integrated approach to promoting healthy ageing and wellbeing in later life

Prof. Anne Hendry. Honorary Secretary BGS, Senior Associate International Foundation for Integrated Care, Scotland

Prof. Pedro Abizanda Soler, MD, PhD

Head of the Geriatrics Department, Complejo Hospitalario Universitario de Albacete, Spain

Introduction and welcome

Speaker biography

Pedro Abizanda is Head of the Geriatrics Department at the Complejo Hospitalario Universitario of Albacete, Albacete, Spain. Specialty in Geriatrics and Gerontology in Getafe 1989 to 1992. Professor of Geriatric Medicine at the Medicine Faculty, University of Castilla La Mancha. President of the Ethics Review Board of the Complejo Hospitalario Universitario de Albacete. Head of the research group on Aging from Albacete (GAITE), included in CIBERFES (Frailty and Healthy Aging Research Spanish Consortium). Editor of the main Geriatric Medicine textbook in Spanish, 89 publications in Pubmed Journals. Topics of interest: Frailty, Sarcopenia, Nutrition, Alzheimer´s disease, Disability, Randomized Clinical Trials in older adults.

Abstract

Thank you very much to Nestle Health Science for supporting this outstanding symposium. "Supporting Successful Aging with Proactive Nutrition: A Look at Muscle, Bone & Joint Health" will give clues for Healthy Aging, the way of enjoying health and well-being in later life. This requires proactive and preventive physical, social and economic strategies and environments that reduce risks to health, enable us to adopt healthy behaviors like physical activity and healthy diet, and provide services that foster capacity.

The United Nations declared 2021 to 2030 as the Decade of Healthy Ageing, ten years of concerted action to enable current and future generations to have longer and healthier lives. Adding life to years is possible.

If we want to experience healthy ageing, we require innovations at all levels (home, community, region and country); across all sectors (housing, transport, information and communication, education, labour, health); engaging all stakeholders (government, non-government, academia, media, business); and across all disciplines (engineering, sciences, education, humanities, arts).

In this symposium, Prof. Stuart Phillips will take a look at the relevance of proteins on the musculoskeletal system as one of the clues for physical function and healthy aging, introducing conditions like anabolic resistance. Prof. Stany Perkisas will deepen on new techniques to assess muscle health and sarcopenia in the clinical setting, with a high interest in muscle ultrasound measurements. Last, Prof. Anne Hendry will give an overview of proactive and integrated approaches to promoting healthy ageing and wellbeing in later life, using the experience from ´Five Ways to Wellbeing with older adults from across Scotland´ (the WeLL project).

I am sure we will enjoy and learn from these admired speakers, taking new ideas for our daily care in our countries.

Prof. Pedro Abizanda Soler, MD, PhD

Head of the Geriatrics Department, Complejo Hospitalario Universitario de Albacete, Spain

Robust older adults: insights and actions for healthy aging

Speaker biography

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Abstract

Maintaining functional independence is of major importance for older adults, in order to enable wellbeing in later life and to delay or prevent adverse outcomes. Therefore, assessing the level of functioning in older adults has become a crucial part of clinical care. It is also of major interest to health policy makers for developing public-health responses to population aging.

The diverse needs of older people are best viewed as a continuum of functioning, ranging from high to low functional independence, and based on the level of functioning, specific interventions may be developed to maintain or improve functional independence and to prevent adverse health outcomes.

Functional independence was previously measured assessing basic and instrumental activities of daily living (ADL). However, this approach showed a high ceiling effect in healthy populations. Studies investigating levels of functioning in relation to survival and health outcomes have focused on the end of the continuum (ADLs impairment) or in its medium stages (frailty), but very few, if any, have done a comprehensive analysis of the initial stages from robustness to frailty. Looking at a wider range of the functional continuum will help to

identify "healthy" populations at risk for disability. These vulnerable populations, still independent in ADL, but at risk of adverse outcomes, are targets for intervention in terms of proactive and preventive measures.

Our group has elaborated a new classification, named "the "Functional Continuum Scale (FCS)" based on the FRADEA Study, that has demonstrated validity to identify older adult populations at risk of mortality and hospitalization, based on eight functional levels (figures 1,2,3)[1,2].

High

Functional Independence

Low

Category	BADL	IADL	Frailty	Measure	N	5-year mortality N (%)	10-year mortality N (%)
1	Independent	Independent	Not frail	Barthel Index ≥90, IADL index = 8 Frailty phenotype = 0	76	1 (1.3)	12 (15.8)
2	Independent	Impairment	Not frail	Barthel Index ≥90, IADL index <8 Frailty phenotype = 0	124	13 (10.5)	33 (26.6)
3	Independent	Independent	Pre-frail	Barthel Index ≥90, IADL index = 8 Frailty phenotype = 1 or 2	174	12 (6.9)	39 (22.4)
4	Independent	Impairment	Pre-frail	Barthel Index ≥90, IADL index <8 Frailty phenotype = 1 or 2	181	42 (23.2)	90 (49.7)
5	BADL independent		Frail	Barthel Index ≥90 Frailty phenotype ≥3	49	19 (38.8)	31 (62.0)
6	Mild BADL impairment			Barthel Index 85-60	168	86 (51.2)	126 (75.0)
7	Moderate BADL impairment			Barthel Index 55-40	48	36 (75.0)	43 (89.6)
8	Severe BADL impairment			Barthel Index <40	104	82 (78.8)	101 (97.1)

Figure 1: *The Functional Contiuum Scale*[1]
BADL: *Basic Activities of Daily Living; IADL: Instrumental Activities of Daily Living.*

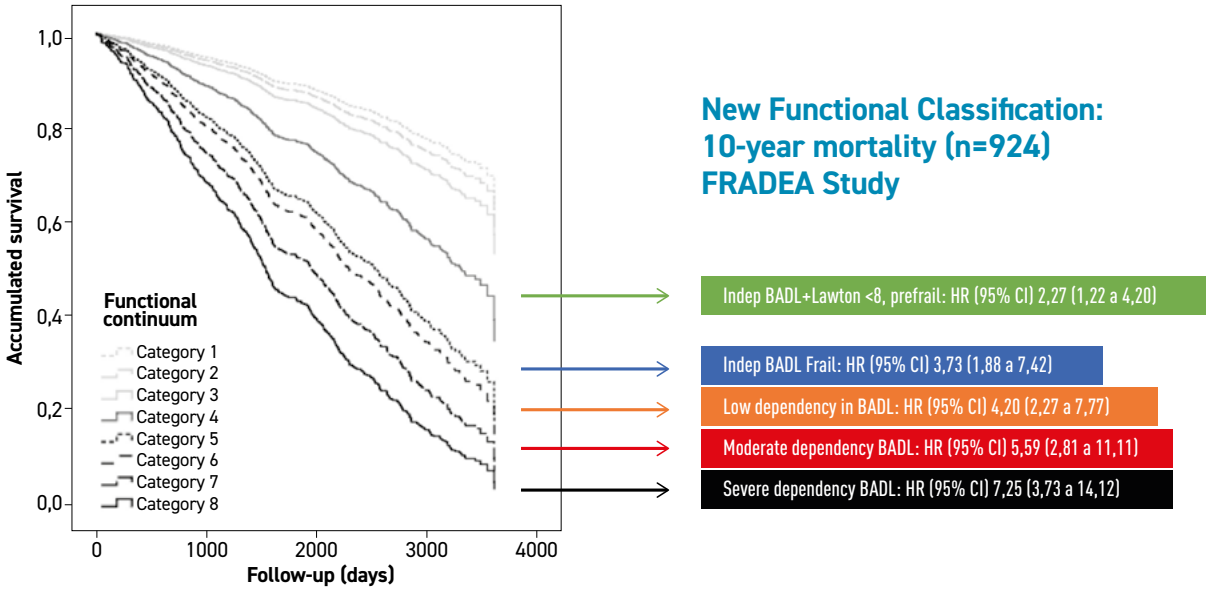

Figure 2: *The Functional Continuum Scale and mortality*[1]

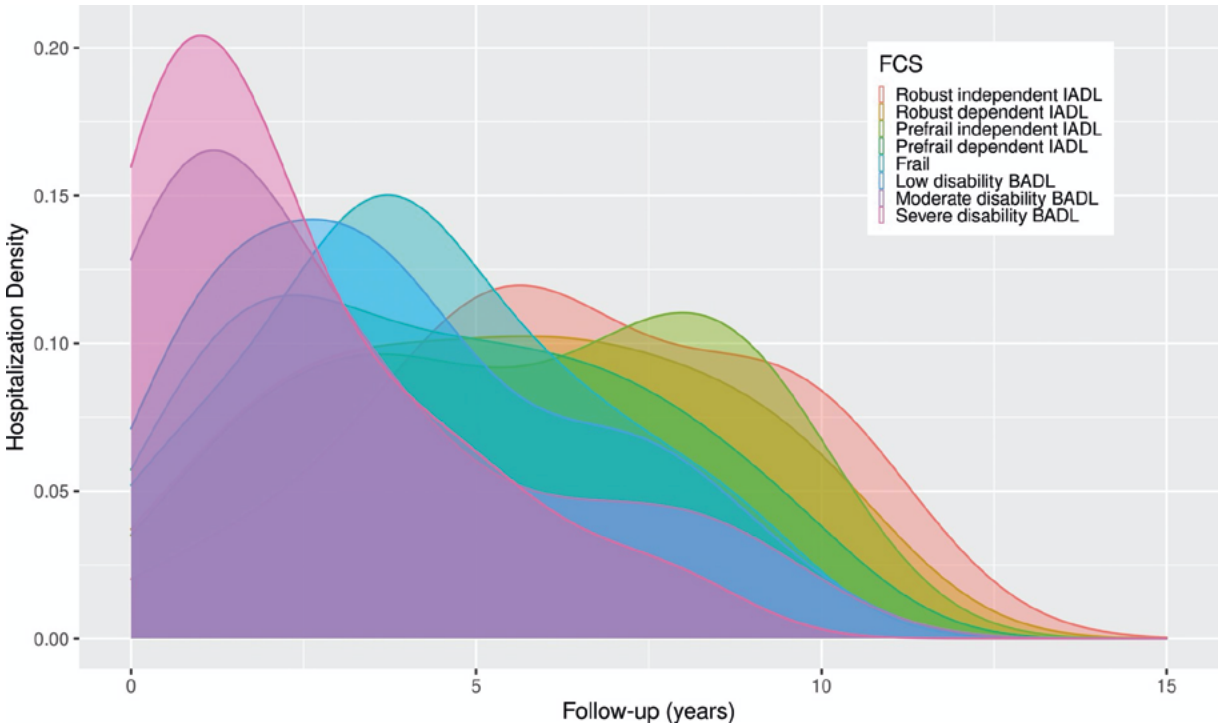

Figure 3: *The Functional Continuum Scale and hospitalization density*[2]

However, new artificial intelligence-based deep phenotyping of healthy older adults may help in the future to better identify robust or pre-frail sub-populations at risk of frailty or incident disability. Incorporating items like nutrition, muscle mass and quality, body composition, physical activity, cognitive and affective aspects, social issues, lab tests, imaging or genetics, will allow to construct digital twins, that will help older adults to adopt those personalized measures that better fit their characteristics to achieve a healthy aging.

References

1. Hoogendijk EO, et. al., A New Functional Classification Based on Fraitly and Disability Stratifies the Risk for Mortality Among Older Adults: The FRADEA Study. JAMDA, 2019. 20: p.1105-1110.

2. Alcantud Corcoles R, et. al., The Functional Continuum Scale in Relation to Hospitalization Density in Older Adults: The FRADEA Study. J Gerontol A Biol Sci Med Sci, 2021.76(8).

Prof. Stuart Phillips, PhD, FACSM, FCAHS

Professor & Tier 1 Canada Research Chair Director, Physical Activity Centre of Excellence (PACE),
McMaster University. Ontario, Canada

Optimizing musculoskeletal health and physical function in older adults: protein and beyond

Speaker biography

Stuart Phillips is a Tier 1 Canada Research Chair in Skeletal Muscle Health. He is also the Director of the McMaster University Physical Activity Centre of Excellence. Dr. Phillips has authored more than 350 research papers. In 2018-21 he was named to Clarivate's Highly Cited Researchers list as a being in the top 1% of all cited researchers in nutrition and physiology research. Dr. Phillips is a fellow of the American College of Sports Medicine and the Canadian Academy of Health Sciences.

General

Lab: https://goo.gl/k4x9Xv
Google Scholar: https://scholar.google.ca/citations?user=VLu9hqgAAAAJ&hl=en

University sites

https://bit.ly/SPhillipsKin
https://experts.mcmaster.ca/display/phillis

Socials

Twitter: @mackinprof
Instagram: @mackinprof
Facebook: https://www.facebook.com/SMPPh.D/
LinkedIn: https://www.linkedin.com/in/stuartphillipsmcmaster/

Abstract

There is likely no clearer reduction in tissue mass with aging than the loss of skeletal muscle. The term coined by Irwin Rosenberg – sarcopenia – describes what is now a syndrome of declines in muscle mass, muscle function and resultant declines in functional ability. The strategy to mitigate declines in sarcopenia with aging rest on two fundamental pillars: physical activity and nutrition. There is abundant evidence to support these two stimuli as critical factors in combatting age-related sarcopenic declines[1,2]. An issue in aging skeletal muscle is anabolic resistance, which describes the decline in skeletal muscle anabolism to normally potent anabolic stimuli, including exercise and dietary protein (aminoacidemia), the reasons for which are shown in Figure 1, below[3]. The fundamental basis of activity, especially loading activity, is that it makes skeletal muscle (and other mechanosensitive tissues such as bone) more receptive to the anabolic (or anti-catabolic) properties of nutrients and, in particular, dietary protein. However, emerging evidence shows that other nutrients may be important in attenuating sarcopenic muscle loss. This evidence-based presentation will demonstrate how physical activity and nutrition, with a particular emphasis on protein, interact to combat sarcopenia. In sum, the mitigation of sarcopenia is pivotal for healthy aging. Physical activity is a fundamental part of any prescription to combat sarcopenia. Dietary protein is important to aid in recovery from physical activity and support muscle and bone health. Other nutrients beyond protein may also be important adjuncts in addressing sarcopenia.

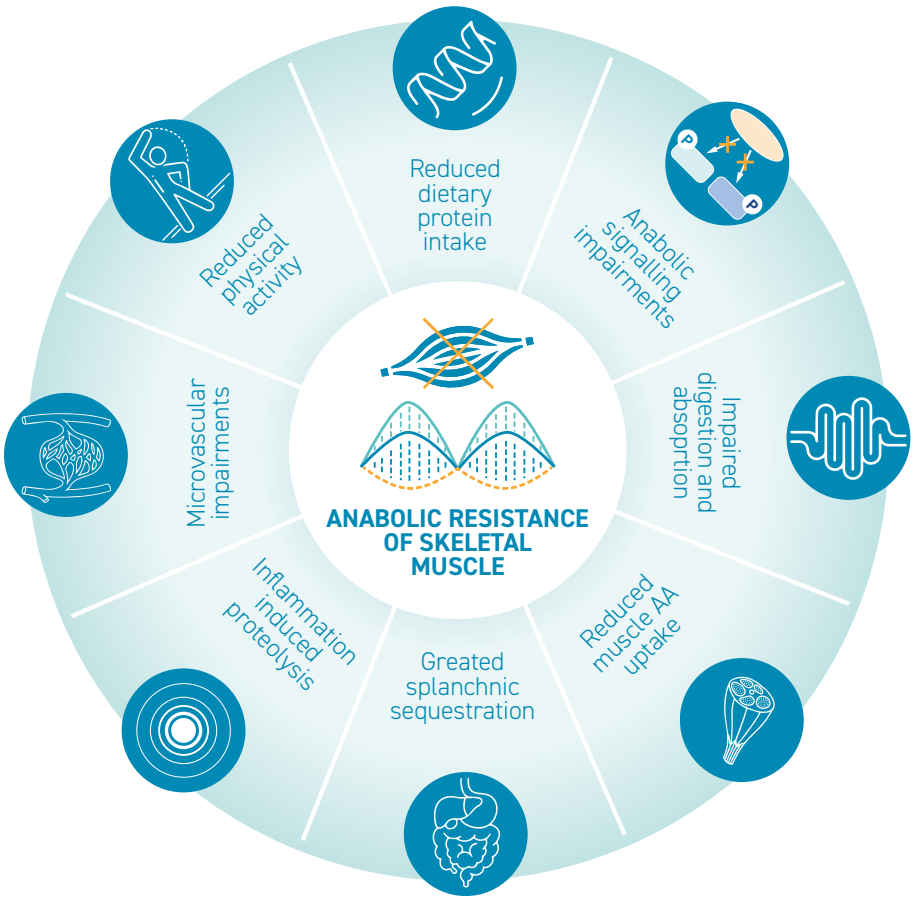

Figure 1. Schematic representation of the factors contributing to developing anabolic resistance of protein synthesis with aging; from[3].

References

1. McKendry, J., et al., Nutritional Supplements to Support Resistance Exercise in Countering the Sarcopenia of Aging. Nutrients, 2020. 12(7).
2. McLeod, J.C., T. Stokes, and S.M. Phillips, Resistance Exercise Training as a Primary Countermeasure to Age-Related Chronic Disease. Front Physiol, 2019. 10: p. 645.
3. McKendry, J., et al., Resistance Exercise, Aging, Disuse, and Muscle Protein Metabolism. Compr Physiol, 2021. 11(3): p. 2249-2278.

Prof. Stany Perkisas, MD, PhD

Professor, Department of Geriatrics,
University of Antwerp, Belgium

Techniques to assess muscle health and sarcopenia in the clinical setting

Speaker biography

Stany Perkisas is a geriatrician at the University Center for Geriatrics in Antwerp, Belgium. He is active in acute geriatrics, rehabilitation and dementia wards. With an expertise in nutrition and sarcopenia, he teaches at the University Antwerp, Karel de Grote College en the Odisee College. In 2018, he founded SARCUS, an international working group under the auspices of the EuGMS, that strives to standardise and implement the use of muscle ultrasound in the assessment of sarcopenia.

Abstract

After the publication of the 2018 updated EWGSOP, there was no real change in clinical practice, as still mostly only the hand grip strength and gait speed were measured. The measurement of muscle mass itself is hardly ever done except in a research setting, which is often not feasible in practice. Also, the use of DEXA and BIA give no qualitative data, and for CT and MRI there is both no standardisation and no cut-off values. The latter two are certainly not an option in bedside assessment. Therefore, we have tried to implement ultrasound in the assessment of muscle. Until now, two articles have been published with 'standardisation rules'[1,2]. New techniques have been investigated[3]. Current methods, standardisation and future implementation in clinical practice will be shown in the presentation.

References

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2. Perkisas S et al. Application of Ultrasound for Muscle Assessment in Sarcopenia: 2020 SARCUS Update. European Geriatric Medicine, Eur Geriatr Med, 2021.

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Prof. Anne Hendry

Honorary Secretary BGS, Senior Associate International Foundation for Integrated Care, Scotland

A proactive and integrated approach to promoting healthy ageing and wellbeing in later life

Speaker biography

A former geriatrician and stroke physician, Anne is honorary secretary of the British Geriatrics Society, honorary professor at the University of the West of Scotland and trustee director of Kilbryde Hospice. From 2007 to 2016 she held national clinical lead roles in Scotland for policy and improvement programmes on Long Term Conditions; Healthcare Quality; Reshaping Care for Older People; and Integrated health and social care. This experience developed her passion for cross sector collaboration and skills in implementing and evaluating transformational change in diverse health and care systems. She is a Senior Associate with the International Foundation for Integrated Care (IFIC), Director of IFICs Country Hub in Scotland, and a member of the editorial board of the Journal of Integrated Care. She was part time tutor for the first cohort of WHOs online learning programme on Healthy Ageing.

@AnneIFICScot

Abstract

Introduction:

Healthy Ageing is the result of a complex interaction between our physical, sensory, vitality and psychological capacities and the environment we live in. Places, spaces, relationships and communities have a big impact on how we develop and maintain functional ability in later life. The environment we live in should enable us to:

- meet our basic needs to ensure an adequate standard of living
- learn, grow and make decisions
- be mobile and participate
- build and maintain relationships
- contribute to society

The cross government framework A Fairer Scotland for Older People recognised that remaining active and engaged in communities is a clear priority for older people, that chronic loneliness is harmful to both mental and physical health, and tackling social isolation and loneliness is fundamental to a thriving older age. An update published in June 2021 highlighted progress but still much to do to deliver local change and support healthy ageing and wellbeing in later life in Scotland.

Aims:

To describe the Wellbeing in Later Life (WeLL) discovery project delivered between October 2021 and April 2022, inspired by the first two priorities of the UN Decade of Healthy Ageing 2021-2030:

- changing how we think, feel and act towards age and ageing;
- developing communities in ways that foster the abilities of older people;
- to illustrate our collective contribution to population health through targeted prevention and proactive anticipatory care for older people with different levels of frailty.

Methods:

Academic and third sector partners from the University of the West of Scotland's International Centre for Integrated Care established a national virtual learning network, overseen by a cross sector advisory group of health, social care and third sector partners. Co-chaired by older people through the Scottish Older People's Assembly (SOPA), the network engaged with the growing cohort of local authority Older People's Champions charged with amplifying the voices of older people in local communities. The project drew on valuable learning from Dementia Friendly Communities, Compassionate Communities

and from the mobilisation of community led and third sector support during the Covid-19 pandemic. The co-production and collective learning approach was underpinned by four design principles of Openness, Inclusion, Creativity and Collaboration. Due to the constraints of the Covid-19 pandemic, the programme was delivered fully online. Recordings were available for those unable to participate live.

Results:

The network explored the Five Ways to Wellbeing with older adults from across Scotland as 'experts by experience'. Overall, 70 organisations and communities in Scotland participated in network events: three interactive WeLL Co-lab learning sessions and six WeLL Café conversations on the themes of Connect; Keep Active; Take Notice; Keep Learning; and Give. This 'in country' knowledge exchange was enriched by two webinars on healthy ageing that involved people from 22 countries. The nine sessions and two webinars were accompanied by flash reports with links to useful resources. The programme materials and final report can be accessed on the webpage of the International Centre for Integrated Care, the home of the International Foundation for Integrated Care in Scotland.

Participants affirmed that all Five Ways to Wellbeing were relevant in the context of later life. They identified Eat Well as an important sixth Way to Wellbeing, highlighting the importance of nutrition for older people to remain active and connect with others. The network participants described food, eating and cooking as fundamentally social experiences with a value beyond nutrition. Participants signposted a range of supports for those who can afford to eat well but may be unmotivated to cook for themselves, particularly if they live alone or are socially isolated. They highlighted the need for urgent action on fuel poverty and related food insecurity that will be faced by a growing number of older people.

Conclusion:

The WeLL project shone a light on the need for collective action at national, local and point of care levels to support healthy ageing. It has helped partners from health, social care, housing, community and voluntary sectors understand their respective contributions to the various actions that enable wellbeing in later life. Project outputs are enhancing our tiered and cross sector approach to proactive multidisciplinary anticipatory care - signposting to a range of community solutions and social prescribing for people identified with mild frailty and prioritising restorative interventions for those who are identified as escalating from mild to moderate frailty.

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3. https://www.alliance-scotland.org.uk/blog/news/community-in-action-publishes-learning-report/
4. New Economics Foundation's 2008 report for Foresight's Mental Capital and Wellbeing: Five Ways to Mental Wellbeing.
5. https://integratedcarefoundation.org/ific_hub/ific-scotland-programmes

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