

Publications

Age and Ageing, January 2021

The My Active and Healthy Aging ICT platform prevents quality of life decline in older adults: a randomised controlled study ^[1]

Innocenzo Rainero,

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Introduction

Prevention of frailty is paramount in older adults. We evaluated the efficacy of a tailored multidomain intervention, monitored with the My Active and Healthy Aging platform, in reducing conversion from a prefrail status to overt frailty and preventing decline in quality of life.

Methods

We performed a multicentre, multicultural, randomised control study. The effects of multidomain interventions on frailty parameters, quality of life, physical, cognitive, psychosocial function, nutrition and sleep were evaluated in a group of 101 prefrail older subjects and compared with 100 prefrail controls, receiving general health advice.

Results

At the 12-month assessment, controls showed a decline in quality of life that was absent in the active group. In addition, active participants showed an increase in mood and nutrition function. No effect on remaining parameter was observed.

Discussion

Our study supports the use of personalised multidomain intervention, monitored with an information and communication technology platform, in preventing quality of life decline in older adults.

Publications in Conference proceedings/Workshop

Real-time monitoring of heart rate by processing of Microsoft Kinect™ 2.0 generated streams ^[2]

Ilaria Bosi, Chiara Coggerino, Marco Bazzani

2016 International Multidisciplinary Conference on Computer and Energy Science (SpliTech)

Real-Time Monitoring of Heart Rate by Processing of Near Infrared Generated Streams ^[3]

Ilaria Bosi, Chiara Coggerino, Marco Bazzani

SMART 2017, The Sixth International Conference on Smart Cities, Systems, Devices and Technologie

Supporting Active and Healthy Aging - An Assistive Process Improvement Approach ^[4]

Gerhard Chroust, Georg Aumayr

SMART 2017, The Sixth International Conference on Smart Cities, Systems, Devices and Technologies

Understanding needs and requirements of target group. Systematic perspective on interaction between system and environment ^[5] ^[5]

Georg Aumayr, Doris Bleier, Gerhard Chroust, Nadine Sturm

Special issue on ICT & Neurodegenerative Diseases - Vol 2 No 3

Conquering frailty with a multi-perspective approach ^[6]

Georg Aumayr, Alessandro Vercelli, Marco Bazzani, Helios de Rosario, Innocenco Rainero, Daryoush Vaziri, Nils Niederstrasser, Stephan Bandelow, Mathew Summers, Eleftheria Giannouli

IDIMT 2017 Interdisciplinary Information Management Talks

Automatic recognition of movement patterns in the vojta-therapy using RGB-D data ^[7]

Muhammad Hassan Khan, Jullien Helsper, Zeyd Boukhers, Marcin Grzegorzek

2016 IEEE International Conference on Image Processing (ICIP)

An automatic vision-based monitoring system for accurate Vojta-therapy ^[8]

Muhammad Hassan Khan, Julien Helsper, Cong Yang, Marcin Grzegorzek

2016 IEEE/ACIS 15th International Conference on Computer and Information Science (ICIS)

Multiple human detection in depth images ^[9]

Muhammad Hassan Khan, Kimiaki Shirahama, Muhammad Shahid Farid, Marcin Grzegorzek

2016 IEEE 18th International Workshop on Multimedia Signal Processing (MMSp)

My-Active and Healthy Ageing (My-AHA): An ICT platform to detect frailty risk and propose intervention ^[10]

Vercelli A, Rainero I, De Rosario H, Summers M, Wieching R, Aumayr G, Bandelow S, Ciferri L, Bazzani M

SoftCOM 2017 - Split, Croatia 21-23 September 2017

From Ambient Assisted Living to Active and Assisted Living: A Practical Perspective on Experiences and Approaches [11]

Georg Aumayr

Information Technologies in Medicine

Transponding in eHealth – when sensors support diagnostics and monitoring [12]

Georg Aumayr

Interdisciplinary Information and Management Talks 2016

Approaches to cognitive stimulation in the prevention of dementia [13]

Nils GNiederstrasser, Eef Hogervorst, Eleftheria Giannouli and Stephan Bandelow

Journal of Gerontology & Geriatric Research 01/s5

Active aging in europe as challenge for health care

Georg Aumayr

eHealth Forum Vienna [14]

Eye movement classification with EOG and motion sensors in instrumented eyewear [15]

Pedrero-Sánchez, José F.; De Rosario, Helios; Martínez-Iranzo, Úrsula

My-AHA: Middleware Platform to Sustain Active and Healthy Ageing [16]

Pedro Madureira, Nuno Cardoso, Filipe Sousa, Waldir Moreira

2019 International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)

Understanding needs and requirements of the target group: Systematic perspective on interaction between system and environment [17]

Georg Aumayr, Doris Bleier, Gerhard Chroust, Nadine Sturm

2017 25th International Conference on Software, Telecommunications and Computer Networks (SoftCOM)

Articles in Journals

Negotiating contradictions: engaging disparate stakeholder demands in designing for active and healthy ageing [18] [18]

Daryoush Daniel Vaziri, David Unbehauen, Konstantin Aal, Irina Shklovski, Rainer Wieching, Dirk Schreiber, Volker Wulf

Journal of Enabling Technologies 13/1

Exploring influencing factors of technology use for active and healthy ageing support in older adults [19]

Daryoush Daniel Vaziri, Eleftheria Giannouli, Antonella Frisiello, Nico Kaartinen, Rainer Wieching, Dirk Schreiber, Volker Wulf

Behaviour & Information Technology - Volume 38, 2019

Mobile health platforms for active and healthy ageing support in older adults: Design ideas from a participatory design study. ^[20]

Vaziri, D.D., Anslinger, M., Unbehau, D., Randall, D., Wieching, R., Schreiber, D., Wulf, V.
International Reports on Socio-Informatics (IRSI) volume 16 issue 2

Trends in Active and Assisted Living – Open hardware architecture, Human Data Interpretation, intervention and assistance ^[21]

Marcin Grzegorzec, Arkadiusz Gertych, Georg Aumayr, Ewa Piłtka
Computers in Biology and Medicine - 95

A general framework for sensor-based human activity recognition ^[22]

Lukas Köping, Kimiaki Shirahama, Marcin Grzegorzec
Computers in Biology and Medicine - 95

Codebook-based electrooculography data analysis towards cognitive activity recognition ^[23]

P. Lagodzinski, K. Shirahama, M. Grzegorzec
Computers in Biology and Medicine - 95

Comparison of Feature Learning Methods for Human Activity Recognition Using Wearable Sensors ^[24]

Frédéric Li, Kimiaki Shirahama, Muhammad Nisar, Lukas Köping, Marcin Grzegorzec
Sensors 18/3

The My Active and Healthy Aging (My?AHA) ICT platform to detect and prevent frailty in older adults: Randomized control trial design and protocol ^[25]

Mathew J. Summers, Innocenzo Rainero, Alessandro E. Vercelli, Georg Aumayr, Helios Rosario, Michaela Mönter, Ryuta Kawashima, A.E. Vercelli, I. Rainero, M. Caglio, C. Carbone, E. Rubino, I. Sousa, M.J.M. Vasconcelos, P. Madureira, J. Ribeiro, N. Cardoso, E. Giannouli, W. Zijlstra, S. Alonso, M. Mönter, S. Schnieder, S.D. Roelen, L. Kächele, J. Krajewski, H. Rosario, J. Laparra, J.F. Serrano, E. Medina, A. López, J.F. Pedrero, Ú. Martínez, M. Bazzani, C. Cogerino, G.M. Toso, G. Tommasone, A. Frisello, G. Aumayr, G. Haider, D. Bleier, N. Sturm, N. Kaartinen, A. Kern, S. Bandelow, N.G. Niederstrasser, D. Vaziri, A. Tabatabaei, P. Gouverneur, P. Lagodzinski, R. Wieching, M. Grzegorek, H. Shariat Yazdi, K. Shirahama, V. Wulf, Y. Cho, R. Kawashima, D. Burin, R. Nouchi, M.J. Summers, L. Ciferri
Alzheimer's & Dementia: Translational Research & Clinical Interventions 4/1

A Novel Square-Stepping Exercise Program for Older Adults (StepIt): Rationale and Implications for Falls Prevention ^[26]

Eleftheria Giannouli, Tobias Morat, Wiebren Zijlstra
Frontiers in Medicine, 14 January 2020

My-AHA ^[27]

Gudrun Haider, Georg Aumayr
ProCare 21/6-7

Deep Machine Learning Application to the Detection of Preclinical Neurodegenerative Diseases of Aging ^[28]

Summers, M. J., Madl, T., Vercelli, A. E., Aumayr, G., Bleier, D. M., & Ciferri, L.

DigitCult-Scientific Journal on Digital Cultures

Transformation and new topics in health care: A short overview on mhealth and aal with example projects. ^[29]

Aumayr, G., Bleier, D., & Sturm, N.

DigitCult-Scientific Journal on Digital Cultures

Requirements and Pitfalls in AAL Projects. Guide to Self-Criticism for Developers from Experience ^[30]

Aumayr, G., Bleier, D. M., & Sturm, N.

Informatics 2017, 4(4), 42

German translation and psychometric properties of the modified Gait Efficacy Scale (mGES) ^[31]

Dorothee Altmeier, Eleftheria Giannouli

Zeitschrift für Gerontologie und Geriatrie

Publications in Conference proceedings/Workshop

Source URL: <http://www.activeageing.unito.it/en/publications>

Links

[1] <https://academic.oup.com/ageing/advance-article-abstract/doi/10.1093/ageing/afaa290/6105936?redirectedFrom=fulltext>

[2] <https://ieeexplore.ieee.org/document/7555944>

[3] http://www.thinkmind.org/index.php?view=article&articleid=smart_2017_2_20_48002

[4] https://www.dropbox.com/s/rj1sjepft8v6u58/contribution_48004_SMART_2017_Special.pdf?dl=0

[5] <https://www.dropbox.com/s/ijsunyxggti41mm/Split%20Paper.pdf?dl=0>

[6] <https://www.dropbox.com/s/lru13uerxhcsue/IDIMT%20Keynote%202017-reviewed.pdf?dl=0>

[7] <https://ieeexplore.ieee.org/document/7532555>

[8] <https://ieeexplore.ieee.org/document/7550788>

[9] <http://ieeexplore.ieee.org/document/7813385/>

[10] <http://research.usc.edu.au/vital/access/manager/Repository/usc:25553>

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https://www.researchgate.net/publication/303537748_From_Ambient_Assisted_Living_to_Active_and_Assisted_Living

[12] https://www.researchgate.net/publication/320015140_Transponding_in_eHealth_-_when_sensors_support_diagnostics_and_monitoring

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https://www.researchgate.net/publication/306128085_Approaches_to_Cognitive_Stimulation_in_the_Prevention_of

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- [28] <https://digitcult.lim.di.unimi.it/index.php/dc/article/view/28>
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