

Study No	Article Title	Year Published	Article Type	Study Type	Country of study	Study population	Sample size	Descriptor of e-health intervention	e-health intervention or relevant to - category	Care Setting	Single Centre / Multi-centre	Prevention (Y/N/NS)	Promotion (Y/N/NS)	Care (Y/N/NS)	Outcome Measure	Statistically Significant Outcome? (Y/N/NS)
1	A game to improve memory in the elderly	2017	Conference Abstract	Design Science Research methodology to determine initial requirements and software architecture	Portugal	Not described	0	Development of interactive software tool to help elderly maintain cognitive abilities (game and personal agenda)	GAMING COGNITIVE TRAINING	No described	Not described	Y - prevent cognitive decline	N	N	Design Science Research Methodology	N
3	A Web services-based exergaming platform for senior citizens: the Long Lasting Memoires project approach to e-healthcare	2011	Conference Paper	Descriptor of e-health service	Greece	Not described	0	ehome: an independent living platform, combined with physical and cognitive training.	GAMING TELECARE COGNITIVE TRAINING PHYSICAL EXERCISE			Y	Y	Y	Not described	N
4	Active ageing: independence through technology assisted health optimisation	2008	Abstract	Intervention descriptor	Not specified	Not described	0	Development of a three-component clothing layering system designed to meet the varied needs of older people wherever they choose to be - expanding the smart home concept to smart environments. Each layer will combine advanced textile technology with miniaturised devices, sensors and transmitters linked within the garment to form a distributed wireless IP hub that is automatically configured to suit the user's needs.	TELECARE	Community	Not specified	NS	NS	NS	Not described	N
5	Addressing healthy aging populations in developing countries: unlocking the opportunity of eHealth and mHealth	2014	Review article	Review article (not systematic)	International	Developing countries	0	Use of mobile devices, such as smartphones, tablets, with particular consideration for the elderly and developed countries in technology care innovation in the areas of disease management needs, intelligent devices aimed at improving disability risks on mobility and falls, and active ageing needs. Most are research and pilot projects.	TELEHEALTH, TELEMEDICINE, EDUCATION, SOCIAL PARTICIPATION, SOCIAL INTERACTION	Developing countries	International	Y	Y	Y	Not described	N
6	Advanced technology care innovation for older people in Italy: Necessity and opportunity to promote health & wellbeing	2014	Comment article	Comment article	Italy	Italy	0	Telemedicine, such as telecardiology, peritoneal dialysis, pressure ulcer monitoring. Technologies for dementia patients and caregivers. Technologies for geriatric syndromes to better understand the age-associated decline (changes in sensory, neurologic and musculoskeletal systems). Technologies for active and healthy ageing - ambient assisted living.	VARIOUS (TELECARE, TELEMEDICINE, EDUCATION, SOCIAL INTERACTION)	Community & institutional	Multi-centre	Y	Y	Y	Not described	N
7	Advocacy of home telehealth care among consumers with chronic condition	2012	Experimental Article	Qualitative study (interview & focus group)	Taiwan	Elderly home residents	12	Living-care services as part of a pilot programme to enhance citizens' health. Services include telemonitoring physiological parameters (blood pressure, blood sugar), providing relevant health information and medication instructions and offering consultations with healthcare professionals by computer or telephone, as well as life-support resource referrals.	TELEHEALTH, TELEMEDICINE	Home	multi-centre	N	Y	Y	Benefits, barriers, experiences, reasons for using, advantages, disadvantages	N
8	Ageing with telecare: care or coercion in austerity	2012	Observational article	Ethnographic and deliberative approaches, observing telecare practices and convening a series of older citizens' panels to discuss and debate their aspirations for care and different telecare solution	Spain, netherlands, norway	Older adults using telecare	96 interviews, 77 periods extended observational, 22 citizens' panels	Telecare services funded by local authority in UK and municipality and private-funded telecare services in Spain, including pendant alarms, falls monitor, medication dispenser.	TELECARE	Home	Multi-centre	Y	Y	Y	Perceptions of care	N
9	An Australian Roadmap for ICT Research & Development for ageing. Lessons from a European Union Initiative	2012	Project report	Research and Technological Development Roadmap	Australia based on EU experiences	Health Ageing Stakeholders	113 individual stakeholders	Development of roadmap and strategic agenda for research and technology development to support active ageing - not an intervention		Ageing in place and beyond	Multi-centre	Y (NS)	Y (NS)	Y (NS)	Roadmap of ICT Development and Innovation	N
10	An integrated approach to telemonitoring noncommunicable diseases: Best practice from the European Innovation Partnership on Active and Healthy Ageing	2013	Comment article	Comment article	France	Not described	0	TELEMONITORING system designed by the Teaching Hospital of Montpellier, France, operational in Software as a Service mode, to follow-up chronic diseases. It is used for administration, lab test and imaging requests, medical files. Aims to develop innovative algorithms and statistical models for decision support. Built for telemedicine.	TELEMEDICINE ICT CLINICAL INFORMATION SYSTEM DECISION SUPPORT SYSTEM	Community	Multi-centre	N	N	Y	Approach to integrated care for non-communicable disease	N
11	Attitudes of the Elderly Toward Information and Communications Technologies	2012	Research article	Questionnaire	Spain	older people registered in the course Tele-Services for the elderly	240	Training course of 30 hours, designed for the teaching and usage of a digital platform specifically for elderly people.	EDUCATION COMMUNICATION SOCIAL PARTICIPATION	Community	Single	Y (NS)	Y (NS)	Y (NS)	social activity, knowledge use of the computer and internet, expectations on	N
12	Challenges and solutions for care of frail older adults	2003	Review article	Review article (not systematic)	United States of America	NA	0	No specific e-health intervention. Only mentions telemedicine as a potential for remote areas for access to specialists and as an educational outreach method.	TELEMEDICINE EDUCATION	Community (but particular focus on rural)	Not described	Y	Y	Y	Not described	N
13	Computerised cognition-based interventions for maintaining cognitive function in cognitively healthy people in late life	2016	Cochrane Protocol	Systematic Cochrane Review Protocol	International	Cognitively health people over the age of 65	NA	Cognitive training interventions that are not expected to modify dementia pathology, but it is hypothesised that the increase in mentally stimulating activity that they induce, will have an impact on the development of clinical dementia.	COGNITIVE TRAINING	Community	Multi-centre	Y	Y	N	Global cognitive functioning	N
14	Computerised cognition-based interventions for maintaining cognitive function in cognitively healthy people in midlife	2016	Cochrane Protocol	Systematic Cochrane Review Protocol	International	Cognitively healthy people 40-65	NA	Same as in #12	COGNITIVE TRAINING	Community	Multi-centre	Y	Y	N	Global cognitive functioning	N
15	Consumer choice of on demand mHealth app services: Context and content values using structural equation monitoring	2016	Research article	Survey Based	South Korea	mHealth application users and recognisers over 44	313	mobile health app usage - apps concerned not specified.	TELEHEALTH	Community	national	Y	Y	Y	mean stress, system usefulness, enjoyment,	N
16	Design of an interactive digital nutritional education package for elderly people	2012	Research article	Questionnaire	Malaysia	60-76 years old	31	A web-based, interactive nutrition education package was developed by applying interactive multimedia. Touch-screen technology as a platform for user interaction. It contains four modules: Healthy Eating Guidelines, Quiz, body mass index (BMI) Calculator and Exercise Demonstration Video.	TELEHEALTH EDUCATION PHYSICAL EXERCISE	Community	Multi-centre	N	Y	N	content, graphics, design layout, colour, font size, audio/video, user-perceived satisfaction and acceptance levels	N
17	Design, implementation and wide pilot deployment of FitForAll: an easy to use exergaming platform improving physical fitness and life quality of senior citizens	2014	Research article	Mixed methods	Greece	Age over 60	116	fitness and life quality of senior citizens. It offers elderly-specific exercises within an engaging game environment aiming at promoting physical exercise protocol adherence. FFA makes use of controllers, such as Wii. 8-week intervention. Training sessions were created and each trainee had to accomplish 20mins aerobic exercises, 8-10 resistance exercises, 10mins flexibility exercise and a set of balance targeted exercises.	GAMING TELECARE COGNITIVE TRAINING PHYSICAL EXERCISE	Community	Single-centre	Y	Y	N	usability, user adherence to exercise, and efficacy	Y
18	Development and Validation of an Interactive Internet Platform for Older People: The Healthy Ageing Through Internet Counselling in the Elderly Study	2017	Research article	Web development & piloting with randomised assessment	France & Finland	Age over 65	41	An interactive internet platform for older people, designed for the HATICE (healthy Ageing Through Internet Counselling in the Elderly) study. Web-based intervention for targeting multiple risk factors for cardiovascular diseases. The intervention focused on 7 modifiable cardiovascular risk factors - hypertension, dyslipidemia, diabetes mellitus, overweight, lack of physical exercise, smoking and unhealthy nutrition. The platform content is based on European clinical guidelines and generic modules for cardiovascular risk profile evaluation, lifestyle support and pharmacological	TELECARE, TELEHEALTH, EDUCATION, COACHING	Community	Single Centre	Y	N	N	Iterative focus group based development, use and number of values added, participant perceptions	N

19	DG Connect Funded Projects on Information and Communication Technologies (ICT) for Old Age People: Beyond Slios, Carewell and SMART CARE	2016	EU Published Project Reports	Comparison of multiple EU Projects	EU	NA	Not specified	Each project uses ICT tools and platforms for integration of care and self-management.	TELEMEDICINE (INTEGRATED CARE), TELEHEALTH	Across care boundaries	Multi-centre	Y	Y	Y	Y	4. Definition of easily transferable, high level pathways with solid evidence.	N
20	Effectiveness of eHealth interventions for the promotion of physical activity in older adults: a systematic review protocol	2016	Systematic Review Protocol	Systematic Review Protocol	(Germany)	Older adults without severe pre-existing chronic medical conditions aged ≥55 years	NA	Interventions: Promote interventions and interventions delivered using gaming consoles (e.g. Nintendo Wii).	TELEHEALTH PHYSICAL EXERCISE	Community	national	N	Y	N	N	Objective (e.g. pedometer accelerometers) or subjective	N
21	Effectiveness of eHealth interventions for the promotion of physical activity in older adults: A systematic review	2016	Systematic Review	Systematic Review	(Germany)	Older adults without severe pre-existing chronic medical conditions aged ≥55 years	N	Review will include studies of eHealth interventions promoting physical activity in older adults. Main intervention component delivered via computer or smartphone.	TELEHEALTH PHYSICAL EXERCISE	Community	NA	n	Y	n	n	Intervention mode and outcome assessment.	n
22	Efficacy of a digital education program on Life Satisfaction and digital self efficacy in older adults: a mixed method study	2016	Conference Paper	Experimental mixed methods	Italy	People aged over 65	167	Use of a tablet as part of free digital education in a reverse mentoring/training system where high schoolers train and teach older adults.	EDUCATION	Community	Single centre	N	Y	N	N	Digital Self efficacy, life satisfaction	N
23	eFurniture for home-based frailty detection using artificial neural networks and wireless sensors	2011	Research article	Experimental creation and assessment of frailty prediction model	Taiwan	People aged over 65		System to manage pre-existing chronic conditions, with 3 components: eScale to measure reaction time; eChair to detect slowness of movement, weakness and weight loss; an ePad to measure balancing ability; eReach to measure body extension) Home-based Information Gateway to collect data	TELECARE	Community	Single centre	Y	N	N	N	Reaction time and slowness measurement; pressure measurement, balance measurement, functional reach measurement, usage.	Y
24	E-health interventions for depression, anxiety disorders, dementia, and other disorders in old age: A review	2011	Review article	Literature review (not systematic)	(Switzerland)	Not specified	Not specified	Interventions: Internet-based cognitive behavioural self-help, virtual reality exposure therapy, Butler system, game-based intervention for older adults with subsyndromal depression, Internet video-conferencing group intervention programme for family caregivers of older adults	GAMING COMMUNICATION COGNITIVE BEHAVIOUR THERAPY	Community	NA	Y	Y	Y	Y	Current state of research literature	N
25	Ethicted – Evaluation Process Model to Improve Personalised ICT Services for Independent Living and Active Ageing: Future Scenario Model	2014	Conference Paper	Comment article	Finland	Elderly population	NA	A standardised procedure to increase the acceptability of ICT, but also provide services for ICT developers. All aspects of ethics (product characteristics – usability, efficiency, performance, space, portability, quality, reliability, validity) (organisational characteristics (delivery, implementation, standards) (external characteristics (interoperability, legislation, privacy, safety) will be processed to receive more quality, efficiency and eventually, satisfied users for ICT in welfare and elderly care.	ETHICS ICT	Community	NA	Y (NS)	Y (NS)	Y (NS)	Ethically produced model	N	
26	Expert Knowledge for Modeling Functional Health from Sensor Data	2016	Literature review & expert consensus	Literature review & expert consensus	Netherlands	health care professionals that work in elderly care	38	Experts from various domains (ICT, health) have been reviewed. Findings were synthesized into 7 categories. Authors also gave recommendations for practice and for functional health assessment with sensors (risky model).	TELECARE	Community	Multi-centre	Y	N	Y	Y	proportion of functional health that can be measured with domestic sensors and to	N
27	From where we sit augmented Reality for an Active Ageing European Society	2014	Comment article	Comment article	Austria	Researchers	NA	The model for the relation between sensor features and functional health can be used as a screening instrument for	TELEHEALTH TELE CARE	Not specified	Not described	Y (NS)	Y (NS)	Y (NS)	Not described	N	
28	GERONTECHNOLOGY: CREATING ENABLING ENVIRONMENTS TO MEET THE CHALLENGES AND OPPORTUNITIES OF AN AGING SOCIETY	2016	Comment article	Comment article	UK & Brazil	Not specified	NA	Forms of gerontechnology, such as AAL.	GAMING REHABILITATION	Community	Not specified	Y	Y	Y	Y	Not described	N
29	Global Access to Aging Information and the Gerontology Healthy Ageing Portal	2010	Comment article	Comment article	USA	Care providers (incl in less well developed or rural environments)	Not specified	Forms of gerontechnology, such as AAL.	TELEHEALTH TELE CARE	Not specified	Multi-centre	N	N	Y	Y	Not described	
30	Growth in the intersection of eHealth and active and healthy ageing	2013	Conference paper	Comment article	EU	Older adults	NA	teranary digital library is installed at more than 250 hospitals, clinics and schools worldwide, serving close to 1 million patrons. A collection of more than 14 million electronic files. Information is contained on a computer disk drive that is physically delivered to institutions in developing countries where there is no internet connection, or limited or expensive connection. There are specific portals for specific collections. To address a critical need for access to gerontology information, the Gerontology Healthy Ageing Portal (GHAP) has been created.	EDUCATION	Community	Not described	Y	Y	Y	Not described	N	
31	Health and Aged Care Enabled by Information Technology	2007	Comment article	Comment article	Australia	Older Adults	NA	Interventions: access to an interactive internet platform specifically designed for use by older people, stimulating self-management of vascular risk factors, with remote support by a coach. Communication between the participant and the coach is through a messaging system within the platform.	TELECARE TELEHEALTH	Community	Not specified	Y	Y	Y	Y	Not described	N
32	Health coaching and pedometers to enhance physical activity and prevent falls in community-dwelling people aged 60 years and over: study protocol for the Coaching for Healthy AGEing (CHANGE) cluster randomised controlled trial	2016	RCT Protocol	RCT Protocol	Australia	Older Adults	TBC (Protocol)	Interventions: pedometers (simple or Fitbit) are used to monitor activity. Use of telephones for health coaching could be considered an eHealth intervention. Participants will also be wearing accelerometers.	TELEHEALTH PHYSICAL EXERCISE COACHING	Community	Multi-centre	Y	N	N	N	Collectively measured physical activity, self reported falls, proportion of falls, the proportion of people meeting the Australian physical activity primary outcomes, etc.	N
33	Healthy Ageing Through Internet Counselling in the Elderly: the HATICE randomised controlled trial for the prevention of cardiovascular disease and cognitive impairment	2016	RCT Protocol	RCT Protocol	Netherlands, Finland, France	people aged 65 years or older who have two or more cardiovascular risk factors and/or manifest cardiovascular disease or diabetes mellitus	TBC (Protocol)	Intervention group: access to an interactive internet platform specifically designed for use by older people, stimulating self-management of vascular risk factors, with remote support by a coach. Communication between the participant and the coach is through a messaging system within the platform. Control group: access to a static internet platform with basic health information.	TELECARE TELEHEALTH EDUCATION COACHING	Community	Multi-centre	Y	Y	N	N	Secondary difference between baseline and month 18 on the individual components of the	N
34	Healthy ageing through internet Counselling in the Elderly: the HATICE ongoing	2016	Part reported RCT	Part reported RCT	Netherlands, Finland, France	Aged over 65 with increased risk of cardiovascular disease & dementia	2600	Intervention group: access to an interactive internet platform specifically designed for use by older people, stimulating self-management of vascular risk factors, with remote support by a coach. Communication between the participant and the coach is through a messaging system within the platform. Control group: access to a static internet platform with basic health information.	TELECARE TELEHEALTH EDUCATION COACHING	Community	Multi-centre	Y	Y	N	N	Composite score of cardiovascular risk factors	N
35	Healthy Aging 2.0: The Potential of New Media and Technology	2012	Comment article	Comment article	USA	Older Adults	NA	Web 2.0 and internet access - incorporation of social networking applications in public health, e.g. HealthTap and PatientLikeMe. Training programmes should be developed to reduce the anxiety older adults may feel about retrieving online health information. eHealth Aging tools to promote healthy ageing at home, to present isolation and neglect and to improve patient-provider communication, e.g. Trumpis reminder tool for medication, Consultation of health literacy safety to determine if plays a role in the use of a PHR, portal, or internet-based information system for health management in a group of older adults. Also the consideration if the group is confident in their ability to find and interpret health information.	TELEMEDICINE TELEHEALTH SOCIAL PARTICIPATION	Community	Multi-centre	N	Y	Y	Y	Empower, engage, and educate these older adults in chronic disease management.	N
36	Impact of Health Literacy on Senior Citizen Engagement in Health Care IT Usage	2017	Research article	Survey Based	USA	The study sample was comprised of older adults (aged 50+) who belong to the Learning Institute for Elders (LIFE) group that meets on campus weekly for educational sessions	181	Intervention designed for the middle-aged and older working population and focuses on increasing knowledge and awareness about cognitive ageing and teaching strategies to cope with cognitive changes.	EDUCATION	Community	Single Centre	N	N	N	N	Older adults willingness to use health information from a variety of sources & Health literacy	Y
37	Improving Nurse Care Coordination With Technology	2010	Case Studies	Case Studies	USA	Older adults	50	Intervention designed for the middle-aged and older working population and focuses on increasing knowledge and awareness about cognitive ageing and teaching strategies to cope with cognitive changes.	TELECARE TELEHEALTH	Community	Single Centre	N	N	Y	Y	Case study based	N
38	Interventions in community settings that prevent or delay disablement and promote healthy ageing in later life	2011	Conference abstract	Literature Review	Scotland	Older adults	NA	From abstract, unknown if any intervention are eHealth ones. New York trials are internet-based.	EDUCATION, COGNITIVE TRAINING	Community	Single Centre	Y	N	N	N	prevent or delay disablement	N
39	"Keep your brain fit" Effectiveness of a psychoeducational intervention on cognitive functioning in healthy adults: A randomised controlled trial	2015	Research article	Randomised Controlled Trial	Netherlands	Middleaged and older working population	376	Intervention designed for the middle-aged and older working population and focuses on increasing knowledge and awareness about cognitive ageing and teaching strategies to cope with cognitive changes.	EDUCATION, COGNITIVE TRAINING	Community	Single Centre	Y	Y	N	N	Subjective cognitive functioning, objective cognitive functioning & psychological well-being	Y

40	MACVIA-IR: Against chronic diseases for active ageing	2015	Conference Abstract	Report on funded research	France	Older adults	NA	Not specified	TELEHEALTH	Community	Single Centre	Y	Y	Y	Y	Delivering ageing and healthy living (j) the promotion of active and	N
41	Multimedia computer-assisted instruction for carers on exercise for older people: development and testing	2010	Research article	Design, development & testing of e-health intervention	Thailand	Carers of older people	65	eLearning tool for carers of older people to promote physical activity	EDUCATION PHYSICAL EXERCISE	Community	Single Centre	N	N	Y	Y	Content validity, user difficulty and user satisfaction.	N
42	New and Future Directions in Integrative Medicine Research Methods with a Focus on Aging Populations: A Review	2015	Literature review	Literature review (not systematic)	USA	Older adults	NA	Review focuses on sensorimotor, hormonal, immune responses to measure psychological, physiological, behavioural, neuroendocrine and immune/inflammatory responses, coupled with an advanced analytic approach to mere these	TELECARE TELEHEALTH	Not specified	Not described	Y	Y	Y	Y	Impact of IM interventions in the elderly	N
43	Older people's production and appropriation of digital videos: an ethnographic study	2016	Research article	Ethnographic study	Spain	60-85	200	The intervention is not an ehealth one. It is looking at HCI in this age group for creating and using videos that could have a social integration aspect.	SOCIAL PARTICIPATION ICT	Community	Single Centre	N	Y	N	N	Motivations for engaging in digital video production, discuss their planned video	N
44	Physical Activity Levels and Patterns in Older Adults: The Influence of a DVD-Based Exercise Program	2015	Research article	Randomised Controlled Experimental Study	USA	Community dwelling older adults	307	DVD-delivered exercise programme	PHYSICAL EXERCISE	Community	Single Centre	N	Y	N	N	Physical activity levels	Y
45	Pilot Test of a New Personal Health System Integrating Environmental and Wearable Sensors for Telemonitoring and Care of Elderly People at Home (SMARTA Project)	2017	Research article	Pilot evaluation	Italy	Independent living age over 65 & clinicians	32	SMARTA personal health system platform to monitor the health of the elderly in their home environment.	TELECARE TELEHEALTH	Community	Single Centre	N	N	Y	Y	User perceptions	N
46	Positive Technology for Healthy Living and Active Ageing	2014	Comment article	Comment article	Italy	Not specified	Not specified	Positive Technologies (use of technology for improving the quality of personal experience) for healthy living and active ageing	TELECARE TELEHEALTH	Community	Not specified	N	Y	N	N	Assessment of technologies to enable Hedonic, Eudaimonic, Social/Interpersonal & role of	N
47	Prescribing Physical Activity for Healthy Aging: Longitudinal Follow-Up and Mixed Method Analysis of a Primary Care Intervention	2015	Research article	Mixed methods	Canada	55-75	20	After the 22-week intervention, determine the improvements made were maintained and discuss with participants their experience in a behavioral health intervention.	TELECARE PHYSICAL EXERCISE	Community	Single Centre	N	Y	N	N	aerobic capacity	Y
49	"Stay Tuned": The Role of ICTs in Elderly Life	2014	Research article	Survey & ethnographic	Italy	Older adults	NA	data that assess change between baseline and follow-up for cardio-respiratory fitness, physical activity levels, with secondary outcomes: QALYs, cost, adverse events.	TELEHEALTH PHYSICAL EXERCISE	Community	Not specified	N	Y	N	N	frequency of internet use, device preference, social media use	N
50	TeleCARE Time Bank: A Virtual Community supported by Mobile Agents	2004	Research article	Protocol presentation	Portugal	Elderly people	0	Survey of young elderly (65-74) in Italy	ICT	Community	NA	N	Y	N	N	feasibility and requirements	N
51	The Elderly Demographic Time Bomb - Sharing the Load with the Active Ageing: Can eHealth Technologies Help Defuse it?	2009	Comment article	Comment article	United Kingdom	Elderly people	0	TeleCARE time bank aims to support the bank concept in the elderly care domain and to provide adequate ICT support tools to facilitate establishment and operation of such communities. TeleCARE multi-agent system platform is installed at each site	ICT TELECARE	Community	Not specified	N	N	Y	Y	ability to adopt to an increasingly aging population	N
52	Virtually Healthy: Chronic Disease Management	2002	Research article	Cohort study with coparator control	USA	high values elderly care patients with significant co-morbidities	791	eHealth technologies, such as telecare, smart environments.	TELECARE TELEHEALTH MANAGEMENT	Community	Multi centre	Y	N	Y	Y	resource utilisation, performance improvement, emergency room visits hospital admissions, 60% hospital bed days of care, 64% VHA nursing home admissions, nursing home bed days of care, functional assessment	Y