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eLILY

eHEALTH LITERACY LEARNING SKILLS AMONG CARERS OF OLDER PEOPLE AND PEOPLE WITH DEMENTIA

SUMMARY RESULTS

OF THE SURVEY ON THE ELECTRONIC HEALTH LITERACY / INTERNET USE AND HEALTH LITERACY RESEARCH, GOOD PRACTICES AND NATIONAL STRATEGY AMONG THE ERASMUS+ ELILY PARTNERSHIP

https://elily.eu

Cyprus University of Technology

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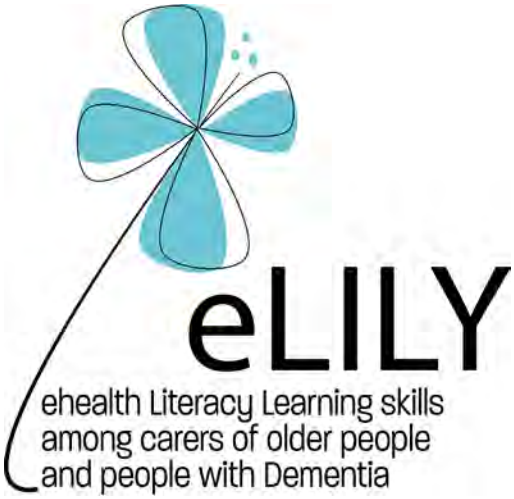

PARTNERS

- COLLEGIUM BALTICUM: Dr Marta Giezek and Beata Mintus
- ANZIANI E NON SOLO: Manuela Tagliani
- ATHENS ALZHEIMER'S ASSOCIATION: Nantia Avrami and Nikoletta Geronikola
- ALZHEIMER BULGARIA: Ivana Kancheva and Angelina Kancheva

Lead Partner of IO2: CYPRUS UNIVERSITY OF TECHNOLOGY

Areti Efthymiou, Dr Evridiki Papastavrou

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A. NATIONAL SPECIFIC INFORMATION ON HEALTH LITERACY AND OLDER PEOPLE OR CARERS OF OLDER PEOPLE WITH DEMENTIA

The most recent definition of Health Literacy has been developed by the HLS-EU team in 2012 (Soerensen, K., Van den Broucke, S. , Fullam, J. , Doyle, G. , Pelikan, J., Slonska, Z., Brand et al., 2012) and describes Health literacy as a term which "entails people's knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course" This definition has been also adapted by the WHO report on health literacy in 2013 (http://www.euro.who.int/__data/assets/pdf_file/0008/190655/e96854.pdf)

Health literacy is a complicated term which according to Soerensen and the HLS-EU framework has 12 core dimensions, including 4 competences: 1) access 2) understand 3) appraise and 4) apply Health information and 3 core dimensions of health system: healthcare, disease prevention and health promotion.

According to the above survey, results showed that a considerable number of citizens has limited health literacy and that may be associated with problematic health behaviors and excessive use of health services.

At the moment, there is an overall HL movement in Europe and as a consequence a European HL network has been established recently: Action Network Measuring Population and Organisational Health Literacy (M-POHL)

The exercise below aims to recognize the available information in a national level of each partner of the eLily Erasmus+ project by drafting a brief report on the HL and eHL for older people in Poland, Cyprus, Greece, Italy, Bulgaria.

A.1.NATIONAL SITUATION ON HEALTH LITERACY ISSUES IN PARTNERS COUNTRIES

A.1.1 POLAND

In Poland for developing e-health are responsible two Ministries: Ministry of Health and Ministry of Digitalization.

Below there is a brief description of the Social Policy for the Elderly 2030 and the Strategy of eHealth Development in Poland

I. Social Policy for the Elderly 2030. Safety - Participation - Solidarity

The document entitled “Social Policy towards the Elderly 2030. Safety - Participation – Solidarity” was adopted by the Council of Ministers on 26 October 2018.

One of the essential parts of the document is a list of individual activities, including the coordinating stakeholder and the cooperating partners, the planned date of implementation and the method of monitoring.

The document provides for the implementation of a number of actions for elderly people in the following areas:

1. Development of a positive perception of old age in society.
2. Participation in social life and supporting all forms of civic, social, cultural, artistic, sports and religious activity.
3. Creation of conditions to use the potential of elderly people as active participants of economic life and the labour market, adapted to their psychophysical abilities and family situation.
4. Promotion of health, prevention of diseases, access to diagnostics, treatment and rehabilitation.
5. Enhancement of physical security – prevention of violence and neglect of the elderly.
6. Creation of conditions for solidarity and intergenerational integration.
7. Educational activities for old age (carers and medical staff), towards old age (the entire society), through old age (from the youngest generation) and in old age (elderly people).

Additionally, “Social Policy for the Elderly 2030” includes activities developed for the first time which are aimed at dependent elderly people:

1. Reduction of the scale of dependence on others by facilitating access to services which strengthen independence and by adjustment of the place of residence to the functional capabilities of dependent elderly people.
2. Ensuring optimal access to health, rehabilitation and care services tailored to the needs of dependent elderly people.
3. Network of environmental and institutional services provided to dependent elderly people.

4. Support system for informal carers of dependent elderly people by public institutions.

Legal basis

Regulation No. 161 of the Council of Ministers of 26 October 2018 regarding the adoption of the document “Social Policy towards the Elderly 2030. SAFETY – PARTICIPATION – SOLIDARITY”.

II. Strategy of e-Health Development in Poland for 2018-22

The aim of the Strategy of e-Health Development in Poland for 2018-22 is to determine the main priorities for e-health policy for the following five years. Targeting activities in this area will contribute to the effective implementation of modern e-health solutions and the elimination of barriers to their application. The programme is addressed to all key stakeholder groups (patients, medical staff, healthcare providers and providers of IT solutions). The programme will lead to the evolutionary digital transformation of the health care system. The effects of the programme will include primarily:

- improvement of the quality and safety of medical services,
- better access to services,
- improvement of work environment of medical professionals,
- optimization of resources,
- optimization and coherence of medical data flows.

The main aim of the work is to increase the efficiency of the health care system thanks to widely available and reasonably used digital technologies.

For patients the effectiveness of the system means for example:

- increased coordination of the treatment and care process and the assessment of the results,
- facilitating the implementation of care coordinated to meet the patient's needs,
- increased independence and enhancement of the role of the patient in the treatment process,
- patients’ access to reliable health information,
- increased transparency and trust in the system.

Computerisation of health care is an important priority and needs to be regulated for optimal management of the health care system in Poland.

A.1.2 CYPRUS

In Cyprus, there is no strategy on health literacy.

The Health literacy work has started by the Nursing Department of the Cyprus University of Technology. The first meetings held on health literacy were organised on 28-29th September 2017 by the department in an attempt to discuss the terminology

in the framework of the phd thesis: The Association of Health Literacy and Electronic Health Literacy With Self-Efficacy, Coping, and Caregiving Perceptions Among Carers of People With Dementia: Research Protocol for a Descriptive Correlational Study.

In the 2nd day, a consensus meeting was held with the participation of experts from Greece and Cyprus including Barbara Kondili and Charalambos Magoulas, researchers of the HLS-EU project on behalf of Greece. The final decision on the terminology has been adopted by Greece and Cyprus.

Cyprus is not member of the M-POHL

Concerning dementia, the Ministry of Health has adopted a strategic plan (2012-2017), through the dementia Committee

https://www.moh.gov.cy/moh/.../STRATEGIC%20PLAN%20CYPRUS%20FINAL.do...

A. 1.3 GREECE

Greece is part of the Action Network Measuring Population and Organisational Health Literacy (M-POHL) (https://dory.goeg.at/s/nApnSmmbeXYPeNf#pdfviewer). Nevertheless, there is no National Strategy on health literacy issues in Greece.

Concerning dementia, the ministry of Health has adopted a national action plan since 2018 (http://www.moh.gov.gr/articles/health/domes-kai-draseis-gia-thn-ygeia/ethnika-sxedia-drashs/95-ethnika-sxedia-drashs) and there is also a Greek national observatory for dementia (http://www.moh.gov.gr/articles/ethniko-parathrhthrio-gia-thn-anoia-alzheimer/greek-national-observatory-for-dementia-alzheimer)

A.1.4 ITALY

In Italy, health literacy strategies are developed and applied, in particular, at local and regional level, with relevant differences among the 20 Italian Regions.

A positive example is the Emilia Romagna Region where a regional strategy and several health literacy projects have been developed and activated, in these years, for promoting health literacy in the local population. Some examples arethe library of the patient (http://biblioteca.asmn.re.it/bibliotecapazienti) and the medical library (http://biblioteca.asmn.re.it/Sezione.jsp?idSezione=974), that have the aim ofhelping patients, family members and citizens to obtain quality health information.

Another positive example is the Veneto Region: the purpose of Veneto Digital Agenda 2020 in the field of Digital Health is achieving efficiency, transparency and sustainability in National Health Service, through the systematic use of digital innovation in healthcare (as established in the Pact for digital health 2016 sanctioned among the Government, the Regions and the Autonomous Provinces of Trento and Bolzano). One of the main objectives of the Agenda regarding the Digital Health is creating a network for helping citizens with few digital skills to use health digital tools,

data and services, stimulating sociocultural and economic development of the community. (http://www.adveneto2020.it/)

Also at national level it is possible to identify some positive practices for improving health literacy in general population: the most important is the health portal of the Health Ministry (http://www.salute.gov.it/portale/salute/p1_2.html) where citizens can find official and updated information. Italy is member of the Action Network Measuring Population and Organisational Health Literacy (https://m-pohl.net/)

A.1.5 BULGARIA

1. **General overview of the National Health Strategy of the Ministry of Healthcare 2014-2020**

In terms of a national strategy on health literacy issues, there is the general National Health Strategy of the Ministry of Healthcare 2014-2020 in Bulgaria which is the leading strategic document that specifies the objectives of the development of the health system by 2020 in the country. It is in line with Bulgaria's commitments at European and international level, but it also embodies the state's desire to choose a national pathway for development and improvement of the healthcare system.

‘‘The vision, objectives and priorities of the Strategy are defined on the basis of an analysis of the health-demographic situation and the state of the healthcare system in the annual health reports of citizens showing that in recent decades the Bulgarian health system falls behind the health systems of the EU countries with regards to the key factors for sustainable development.

Based on the analysis of the health-demographic situation of the population, Bulgaria sets its National Health Objectives, which are an objective expression of the focus of the health policy on the sustainable improvement of the health of Bulgarian citizens in all age groups:

- Reduced mortality among children aged 0-1 to 6.8 per 1,000 live births;
- Decrease in mortality among children aged 1-9 up to 0.24 per 1000;
- Decrease in mortality among adolescents and young adults aged 10-19 years to 0.28 per 1000;
- Decrease in mortality among persons in economically active groups from 20-65 years to 4.19 per 1000;
- Increase the average life expectancy of people from the age of 65 with 16.4 years.

Achieving the five national health targets by 2020, while ensuring the sustainability of the policies and implemented measures, will allow Bulgaria to reach the current average European levels of the five indicators by 2025.’’

2. Development of eHealth as part of the National Health Strategy of the Ministry of Healthcare 2014-2020

Part of the strategy of the Ministry of Healthcare is the development of eHealth that should become an essential tool for ensuring the effective functioning of the healthcare system. A key measure is the integration and connectivity in the health sphere through the establishment of a national health information system and the provision of access of citizens to the system through an electronic identifier. This unified health information system is the basis on which the eHealth system and its core components can be developed, e.g. electronically available health dossier, electronic recipe, e-mail, electronic portal, etc. Such an online opportunity will provide access to information to patients for their own health, and will improve the interconnectedness between all levels in the system, as well as the quality of the medical services and the effectiveness of public expenditures for healthcare.

The ongoing development of the National Health Information System also focuses on telemedicine services. Their application for diagnosis, treatment and intervention will contribute to the improvement of the quality and accessibility of medical services.

Measures

• Implementation of national health information standards: developing mandatory standards for health information and statistics; Developing security and interoperability policies for the information systems in healthcare.

• Building a unified National Health Information System and ensuring citizen access to the system via an electronic identifier.

• Expanding and upgrading the modules of the health information system by implementation of electronic health cards, real - time information exchange between employees in the electronic healthcare field, electronic prescriptions, laboratory data and research; an electronic health record of each patient.

• Implementation of Information and Communication Technologies in Bulgaria and health infrastructure to ensure the connectivity of all providers of medical services through computer networks, communication devices, Internet access; providing hardware capability for centralized electronic registers and electronic databases; introducing secure user authentication through encrypted forms of data exchange.

The expected result is to achieve integration and connectivity in the field of healthcare through a national health information system providing real patient access to information about patients' health.

As for the Action Network on Measuring Population and Organizational Health Literacy, Bulgaria is part of the network (https://m-pohl.net/).

Sources:

Ministry of Health website: http://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/nacionalna-zdravna-strategiya-2020/

https://www.mh.government.bg/media/filer_public/2015/04/08/nacionalna-zdravna-strategia_2014-2020.pdf

A.2. RESEARCH WORK PUBLISHED OF HEALTH LITERACY IN PARTNERS COUNTRIES

A.2.1 POLAND

Authors, year	*Aim*	*Target Group*
(Woynarowska-Sołdan & Węziak-Białowolska, 2012)	*To provide a psychometric analysis of the Positive Health Behaviour Scale (PHBS) for use with adults.*	*The sample consisted of 567 respondents (teachers from different schools)*
(Lar, Holecki, Syrkiewicz-Świtała, Sobczyk, & Wróblewski, 2015)	*Cooperation of non-governmental organisations and local governments in health care system*	*The study sample comprised 207 communities, 204 district towns, and 14 regional self-governments.*
(Gruszczynska, Bak-Sosnowska, & Plinta, 2015)	*Showing current state of knowledge about health and health behaviors of Poles and a review of basic theories related to the change of these behaviors.*	*review of the theory – general population*
(Sygit, Sygit, Swierczynska, & Pasierbiak, 2017)	*Research on Population Health Needs and Public Opinion Related to the Functioning of the Health Service – Crucial Elements in*	*Literature review and review of public opinion*

	Management of Healthcare Entities	
(Wróblewska et al., 2018)	*This study aimed to assess the relationship between diseases and health behaviors, as well as the everyday functioning of people aged ≥65 years staying in their home environment.*	*The research involved 504 elderly people. The inclusion criteria were age (≥65 years) and staying in one's own home environment.*

A.2.2 CYPRUS

Authors, year	*Aim*	*Target Group*
(ERASMUS+ MEET PROJECT, 2013)	*Assess health literacy needs of migrants in Cyprus*	*Immigrants*
(European Commission, 2014)	*Executive summary of HEALIT4EU* *This study (HEALIT4EU) has produced a state-of-the art insight into:* 1. *intervention studies on health literacy that are performed in EU Member States,* 2. *policies, programmes and actions that are being initiated and implemented in EU Member States, and* 3. *the possibility to estimate health literacy levels using a prediction model.*	*General population*

(Souliotis et al., 2016)	*Participation of Patients' association in health policy decision making*	*Patients associations in Cyprus*
(Efthymiou, Middleton, Charalambous, & Papastavrou, 2017)	*To identify the levels of health literacy and ehealth literacy levels on the caregiving variables of carers of people with dementia*	*Informal carers of people with dementia in Greece and Cyprus*
(Moreira, 2018)	*HEALTH LITERACY FOR PEOPLE -CENTRED CARE Including information on the health literacy in EU*	*General population*

A. 2.3 GREECE

Authors, year	*Aim*	*Target Group*
(Vozikis, Drivas, & Milioris, 2014)	*"Bring into focus the functional health literacy among university students in Greece, researching and assessing mainly their ability to apply basic knowledge in a health context".*	*"Random sample of 1,526 students of 14 Higher Tertiary Public universities and Technological Educational Institutes in Greece".*
(Soerensen, K., Van den Broucke, S. , Fullam, J. , Doyle, G. , Pelikan, J., Slonska, Z., Brand et al., 2012)	*"Describes the design and development of the European Health Literacy Survey Questionnaire (HLS-EU-Q), an innovative, comprehensive tool to measure health literacy in populations".*	*"Development, pre-testing, field-testing, external consultation, plain language check, and translation from English to Bulgarian, Dutch, German, Greek, Polish, and Spanish"*
(Kondilis, Agrafiotis, & Ph, 2012)	*"The project was developed with the aim to develop a tool that measures health literacy in 8 European Countries (Greece among them)". The report for Greece only can be found in http://www.esdy.edu.gr/files/006_Koinoniologias/HLS-*	*For Greece only: 1000 participants, 50,3% men and 49,7% women, mean of age 46 years old.*

	EU%20country%20report_Greece_2012_GR.pdf	
(Vardavas, Kondilis, Patelarou, Akrivos, & Falagas, 2009)	*"To assess the sources of health information of adolescents in a sample of teenagers from Athens and Crete, Greece".*	*"369 adolescents aged 12-18 years from urban areas of Athens and Crete, Greece".*

A.2.4 ITALY

* Italy is one of the EU nations with the highest number of research publications in fields related to health literacy, after Netherlands, Sweden and Germany (Kondilis, Kiriaze, Athanasoulia & Falagas 2008).

Authors, year	***Aim***	***Target Group***
(Della Pelle, Orsatti, Cipollone, & Cicolini, 2018)	*"To assess the levels of health literacy of Italian caregivers of patients with heart failure."*	*173 caregivers, the majority aged between 46-60 years*
(Cianfrocca et al., 2018)	*"To understand whether a multidisciplinary theoretical-practical training course could influence the burden, health literacy and needs of caregivers."*	*Family caregivers*
(Lorini et al., 2017)	*"To assess the level of HL in a sample using the Italian version of the Newest Vital Sign and the association of HL and selected antecedents with health outcomes, and to develop and validate the Italian version of the three*	*General population aged 18–69, Italian speaking. Exclusion criteria: cognitive impairment, severe psychiatric diseases, end-stage diseases.*

	Brief Health Literacy Screeners, two subjective numeracy items and the short form and the short-short form of the European Health Literacy Survey Questionnaire".	
(Bonaccorsi et al., 2017)	*"To measure HL levels among a sample of adult Italian patients; to develop and validate the Italian version of the single-item literacy screener (SILS); to assess the diagnostic accuracy of the SILS as an indicator of limited reading ability regarding health documents, compared to the newest vital sign (NVS)".*	*General population from 19 to 90 years old, able to speak Italian. Exclusion criteria: patients with cognitive impairment.*
(Palumbo, Annarumma, Adinolfi, & Musella, 2016)	*"To discuss the changing patterns of users' behavior in the health care service system. Although patient engagement and health services' co-production are understood as essential ingredients in the recipe for sustainable health systems, some determinants to patient involvement are still widely neglected by both policy makers and health care professionals. Among*	*A random sample of 600 Italian patients*

	others, inadequate health literacy performs as a significant barrier to patient empowerment."	
(Ponzani, 2017)	*To describe the phenomenon of health literacy in Italy and the positive role of libraries and librarians in "promoting health literacy and creating information tools that allow everybody to access certified and reliable information, written in a very clear language and easily comprehensible even by citizens without adequate health literacy".*	*General population*

A.2.5 BULGARIA

Authors, year	*Aim*	*Target Group*
(Garov & Popov, 2018) *http://tru.uni-sz.bg/tsj/Vol.16,%20Suppl.1,%202018/42.pdf*	*The purpose of the article is to analyse the health literacy policies and programs, which were used in Bulgaria.*	*There is no concrete target group. The method used in the article is documentary research, so rather than relying on a particular target group, the study outlines a review of the literature concerning*

		health literacy in Bulgaria
Literacy in Bulgaria, Country report	*This report on the state of literacy in Bulgaria is one of a series produced in 2015 and 2016 by ELINET, the European Literacy Policy Network. ELINET was founded in February 2014 and has 78 partner organizations in 28 European countries.*	
Tsvetelina Milcheva Petrova-Gotova *THE HEALTH LITERACY, POVERTY AND HEALTH - THE INTERCONNECTION, ECONOMIC AND SOCIAL CONSEQUENCES*	*A literature review on health literacy among the general population*	*A literature review of health literacy among the general population.*
(Sørensen et al., 2015) *(European Commission, 2014)*	*HLS-EU survey, aiming to assess the health literacy levels in 8 countries: Austria, Bulgaria, Germany, Greece, Ireland, the Netherlands*	*1000 participants general public*
(Pesheva et al., 2018)	*"The objective of this study is to examine the*	*"second year medical students at*

	health literacy of medical students."	*the Medical University - Sofia"*

B. NATIONAL SPECIFIC INFORMATION ON EHEALTH LITERACY AND INTERNET USE OF OLDER PEOPLE OR CARERS OF OLDER PEOPLE WITH DEMENTIA

eHealth Literacy initially has been defined by (C. D. Norman & Skinner, 2006) as a concept including 6 core dimensions: 3 analytic and 3 context specific: traditional, media and information literacy as analytic and computer, scientific and health literacy as context specific. The specific framework is known as Lily framework and has accepted critic in recent years, as doesn't include parameters of Web 2.0 (C. Norman, 2011).

The most recent definition that followed the one by (Bautista, 2015) is the one proposed by (Paige et al., 2018) and defines eHealth literacy as : *The ability to locate, understand, exchange, and evaluate health information from online environments in the presence of dynamic contextual factors and to apply the knowledge gained across ecological levels for the purposes of maintaining or improving health.*

At the moment, there is no available literature for carers of people with dementia apart from few published papers by (Blackburn, Read, & Hughes, 2005; Kim, 2015; Lam & Lam, 2009) on internet use among carers of people with dementia.

Cyprus University of Technology is in the process of implementing a research protocol: a Health Literacy and eHealth Literacy of people with dementia and how may affect different caregiving variables (Efthymiou et al., 2017).

The specific project, eLily model is the first training programme adapted to the needs of carers of people with dementia by enhancing eHealth literacy skills and not in general ICT skills.

As in the case of Health literacy above, you need to identify the possible terms available in your national language.

In case of eHealth literacy, you may encounter terms as online, digital or Health related internet use. Take the above into consideration you might find information when searching in all available translations.

B.3.RESEARCH WORK PUBLISHED OF EHEALTH LITERACY IN PARTNERS COUNTRY

B.3.1 POLAND

Authors, year	*Aim*	*Target Group*
(Jurczak et al., 2017)	*Analyze opinions of patients and medical staff about e-health services.*	*patients and medical staff in West Pomeranian Voivodeship (340 people)*
(Korczak, 2017)	*The perspective of different stakeholders in the health care system. Paradoxes of e-Health*	*The article presents an overview of selected e-Health solutions supporting health care and the characteristics of the selected paradoxes of e-Health.*
(Duplaga & Grysztar, 2012)	*Assessment of the views of physicians on feasibility of e-health systems with special regard for acceptance of their implementation.*	*The questionnaires were distributed Among200 physicians participating in courses on 'Public Health' organized by Medical Centre of Postgraduate Education, Jagiellonian University, in Krakow from November 2011 to December 2012.*
(Gugala, Boratyn-Dubiel, Chmiel, & Januszewicz, 2010)	*Presenting medical professionals' and patients' expectations with respect to Internet-based medicine and at specifying their ability to verify unreliable medical information.*	*Internet users*

B.3.2 CYPRUS

Authors, year	*Aim*	*Target Group*
(Papa et al., 2016)	*Selected health applications and websites for carers of people with dementia*	*Carers of people with dementia*
Efthymiou, Middleton, Charalambous,	*Reliability and Validation of the ehealth Literacy Scale for Carers of people with chronic diseases*	*Carers of people with dementia*

Papastavrou (Preprint)	*(eHeals-Carer) in a sample of Greek and Cypriot carers of people with dementia (Preprint)*	
(Millioni & Stylianos, 2016)	*The internet access and use in Cyprus*	*General public*
(Ministry of Communications and Works, 2012)	*Presenting the digital plan for Cyprus*	*General public*
(Jossif et al., 2007)	*Selected eHealth applications in Cyprus from the training perspective*	*Health applications in Cyprus*

B.3.3 GREECE

Authors, year	Aim	Target Group
Efthymiou, A., Middleton, N., Charalambous, A., Papastavrou, E. (PREPRINT).	*"To adapt and validate the tool for carers of people with dementia in Greek language in Greece and Cyprus".*	*"A descriptive study with face to face interviews among 101 primary carers of people with dementia was conducted".*
(Athanasopoulou et al., 2017)	*"The aim of this study was to examine computer/internet use for general and health-related purposes, eHealth literacy, and attitudes toward computer/Internet among adults with schizophrenia spectrum disorders from two distant European regions (Finland and Greece)"*	*"Data were collected from mental health services of psychiatric clinics in Greece. 101 patients participated in the questionnaire survey for Greece and 128 from Finland".*
(Efthymiou et al., 2017)	*"To investigate the level of eHealth literacy and health literacy of primary and secondary carers of people with dementia, to explore the association between health and eHealth literacy, as well*	*"A sample of 200 primary carers (the carer who supports the people with dementia in everyday living) and 200 secondary carers (family member,*

	as their association with the caregiving variables: self-efficacy, coping, and caring perceptions".	*friend, or other person in the social network assisting the primary carer in their role) will be recruited from dementia day care centers and Alzheimer's associations in Greece and Cyprus".*
(Xesfingi & Vozikis, 2016)	*"The aim of the study is to assess the eHealth literacy level of of Greek citizens, using the eHealth Literacy Scale (eHEALS), and further explore the factors that shape it and are associated with it".*	*"Unique sample of 1064 Greek citizens in 2013".*

B.3.4 ITALY

Authors, year	***Aim***	***Target Group***
(Bravo et al., 2018) *http://www.epicentro.iss.it/ben/2018/luglio-agosto/2*	*To Validate the Italian version of the digital health literacy questionnaire (eHealth Literacy Scale)*	*Italian adults*
(Lusardi, Radin, & Tomelleri, 2018)	*"The paper focuses on the planning of an eHealth project, the training of different stakeholders, and the extent of health professionals' involvement, in order to assess their engagement and commitment. The article suggests that patients' and health professionals'*	*Patient and health professionals*

	engagement in the design and implementation of an e-health project is the key to its success; this requires adequate training of all the stakeholders but in turn it enhances transparency and commitment."	
(Siliquini et al., 2011)	*"The aims of this study are to provide information about the prevalence of Internet use for health-related purposes in Italy according to demographic and socio-cultural features, to investigate the impact of the information found on health-related behaviors and choices and to analyze any differences based on health condition, self-rated health and relationships with health professionals and facilities."*	*3018 individuals between the ages of 18 and 65 years.*

B.3.5 BULGARIA

Authors, year	*Aim*	*Target Group*
(ECDC, 2011) *Higgins O, Sixsmith J, Barry MM, Domegan C (2011)*	*Literature review on the topic of health information seeking behaviour in different countries.* *The study reports in terms of internet access of Bulgarian citizens*	*Bulgarian citizens*

(European Parliament Research Service (Scientific Foresight Unit), 2015)	*A literature review about the trends concerning E-health in Europe.*	*Bulgarian citizens*
(Mircheva, 2016) http://journals.mu-varna.bg/index.php/sssp/article/view/1508/1715	*This study assesses the readiness of Bulgarian physicians to use E-health applications, Health environment.*	*Bulgarian physicians*

B.4.MOST RECENT STATISTICS OF INTERNET USE AMONG OLDER PEOPLE IN PARTNERS COUNTRY ACCORDING TO CENSUS REPORT:

B.4.1 POLAND

"From the results of researchers carried out by Social Opinion Research Centre (2017) only 23% of seniors use internet. 75% of elderly people using the internet that connect to the wireless network, using portable devices, such as a mobile phone, laptop, netbook, tablet"(https://www.cbos.pl/SPISKOM.POL/2017/K_049_17.PDF)

"In the report "The impact of the Internet on the daily life of people 50+" prepared by Digital Coalition of Inclusion of Generation 50+ "Maturity on the Web" we can find information about using Internet of people 50+ (barriers, opportunities and challenges") (https://sbc.org.pl/Content/93935/Raport2.pdf)

B.4.2 CYPRUS

http://www.mof.gov.cy/mof/cystat/statistics.nsf/All/FB5BC30DA3227200C22581F000382D4B/$file/Summary_Report-ICT_HH-2017-EN-151217.pdf?OpenElement

2017: 75.9% access to personal computer, laptop, tablet

When there Is dependent children in the household this percentage is increased to 94.9%. Internet access: 79.4%, with main aim of not accessing the lack of skills and 42% claims that the access and equipment is expensive. Age and education are important factors.

80.7% accessed internet aged 16-75 in the 1 quarter of 2017

8 out of 10 people use the internet at least once a week

People over 55 years old are less frequent users of the internet

71% of internet users are seeking health related information

B.4.3 GREECE

The only report we can found concerning internet use is from the Hellenic Statistical Survey (2015) for participants from 16 to 74 years old.

http://www.statistics.gr/documents/20181/51246a10-a5d9-44ae-9186-d17d55a496a0

B.4.4 ITALY

Source: ISTAT 2017, http://dati.istat.it/Index.aspx?DataSetCode=DCCV_ICT#

Use of Internet

Age	% of people that use internet	% of people that use internet all days	% of people that use internet once or more time a week	% of people that use internet some times a month	% of people that use internet some times a year	% of people that don't use internet
Aged 60-64	*56*	*35.5*	*17.3*	*2.1*	*1.1*	*43.1*
Aged 65-74	*30.8*	*17.3*	*10.7*	*1.8*	*1*	*68.3*
Aged 75+	*8.8*	*3.9*	*3.5*	*0.8*	*0.6*	*90.6*

Age	% of males that use internet	% of males that use	% of males that use internet once or	% of males that use internet some	% of males that use internet some	% of males that don't

		internet all days	more time a week	times a month	times a year	use internet
Aged 60-64	*63.8*	*41.8*	*18.7*	*2.1*	*1.2*	*35.5*
Aged 65-74	*38.4*	*22.5*	*12.3*	*2.2*	*1.4*	*60.4*
Aged 75+	*13.5*	*6.5*	*5.3*	*0.9*	*0.8*	*85.9*

Age	% of females that use internet	% of females that use internet all days	% of females that use internet once or more time a week	% of females that use internet some times a month	% of females that use internet some times a year	% of females that don't use internet
Aged 60-64	*48.3*	*29.3*	*15.9*	*2.1*	*1.1.*	*50.6*
Aged 65-74	*24.2*	*12.8*	*9.2*	*1.4*	*0.7*	*75.1*
Aged 75+	*5.5*	*2.1*	*2.2*	*0.7*	*0.5*	*93.9*

Source: ISTAT 2016, http://dati.istat.it/Index.aspx?DataSetCode=DCCV_ICT#

Activities done on Internet: finding health information

Age	% of people	% of males	% of females

Aged 60-64	*52.1*	*44.7*	*61.4*
Aged 65-74	*52.1*	*52.5*	*51.6*
Aged 75+	*45.7*	*44.9*	*47.4*

B.4.5 BULGARIA

This statistic shows the percentage of individuals using the Internet by frequency in Bulgaria in 2018 - in 2018, 64 percent (64 %) of individuals in Bulgaria accessed the Internet daily or more frequently. Fifty-five percent (55 %) use the Internet daily, 8 % use it at least once per week, but not every day, and 1 % - less than once a week. This is a general statistic and there is no discrete survey about Internet use among older people in particular.

Source: https://www.statista.com/statistics/379026/internet-usage-at-home-bulgaria/

Source: National Comprehensive Strategy for Active Ageing in Bulgaria 2016-2030

https://www.mlsp.government.bg/ckfinder/userfiles/files/politiki/demografska%20politika/publikacii/Draft_National_Comprehensive_Strategy_project_En.pdf

1. **National Comprehensive Strategy for Active Ageing in Bulgaria 2016-2030**

Communication and Information Technology

“In 2015, the use of Internet by households across Bulgaria increased by almost 20% from 33,1% in 2010 to 59,1% in 2015. The Southwest Region (67,8%) is the top performer and the Northwest Region ranks at the bottom (44,9%) in 2015. The reasons for that are that the capital city Sofia, which shows the highest Internet use rate, is in the Southwest Region. Other contributors include the standard of living and the level of economic activity of the population. A positive trend is observed in the use of Internet by elderly people aged between 55 and 64 years, which increases on a year-to-year basis. For example, in 2009, 16,4% of older people used Internet services,

whereas in 2015 their share increased to 37,6%. Between 2004 and 2014 the highest use rate is registered in the Southwest Region, the disparity between the regions decreasing year on year and data for 2015 showing a top performing North Central Region in terms of Internet uptake by people aged over 55 (48,7%), followed by the Southwest Region (46,1%). On average, 22,2% of women and 21,8% of men aged 55-74 years use the Internet at least once a week, which demonstrates that there is little difference in Internet uptake between women and men. Internet uptake by elder people in Bulgaria increases, but the share of older people (Eurostat, Individuals – Computer Use, 2015) show that on average 59% of the population aged between 55 and 74 years in all Member States use the Internet, whereas in Bulgaria only 27% do so. Besides, Bulgaria registers even lower rates on frequency of use - 12% for Bulgaria against 46% for the EU use Internet at least once a week (Eurostat, Individuals - frequency of computer use, 2015). The low level of use by elderly people could be attributed to absence of technologies at home – only 18% of persons aged between 55 and 74 years report using a computer at home (Eurostat, Individuals - places of computer use, 2011). Internet use and mobile technologies can benefit people's lives and there is an urgent need to make them part of the life of the elderly in Bulgaria as well. The access of older people to information can therefore notably improve and the latter could bring about a positive effect on their lives.''

There is another useful statistic which does not really address the question of Internet use among older people, but it reports that in terms of adequate housing conditions and services, elderly Bulgarians do not have basic amenities in their homes. Despite the positive trends in recent years, one fifth and one fourth of elder Bulgarians aged over 65 and living alone do not have an indoor flushing toilet. The share of older people whose homes are not in a good condition in this age group is also high and the problem is more vividly present among women. Over the last few years, the housing conditions in the country showed improvement, including those of households with old people. It has been noted that elderly women living alone have poorer living conditions than elderly men living alone.

''In terms of accessible transport, most of the bigger Bulgarian municipalities experience a process of renovation and modernisation of public transport. At the same time, a number of smaller municipalities lack funds and are substantially lagging behind in providing modern transport adapted to the needs of the elderly. In large part, older Bulgarians are not mobile and so they limit their trips and travel within the country. Bulgaria is falling behind in adapting the transportation infrastructure to the needs of persons with disabilities and reduced mobility in order to make it more accessible, safe and secure for older people with a view to encourage their independence and enable them to participate more actively in society. The proportion of Bulgarians aged 50-64 who experience difficulties in accessing public transport is about 21%, increasing to 27% among people aged over 64 years. Limited access is the result of reduced frequency of urban and interurban transport lines/services, as

well as of difficulties in accessing vehicles, as well as their overall condition which is not always favourable for elderly members.''

Another interesting statistic shows that ''the highest share of respondents in Bulgaria navigate the Internet to read articles (43%), followed by downloading music (45%), listening to radio or music (40%), downloading movies and different programs (35%).''

Based on the above information, it can be concluded that older people in Bulgaria do not use the Internet primarily for health purposes; there is no sufficient and adequate provision of health services to Seniors; there is no availability even of basic amenities in their households. Therefore, considerable improvement is needed in all domains.

B.5. RELATED ERASMUS+ FUNDED PROJECTS ON THE USE OF INTERNET BY OLDER PEOPLE OR CARERS (E.G ENHANCING ICT SKILLS ETC).

B.5.1 POLAND

Senior w sieci (Senior on the net)- project funded by City Hall in Kraków; the aim of the project was help seniors use the mobile devices and surf on the internet.

"Connect with ICT" - EU Grundtvig project dedicated to seniors, the aim was to improve computer skills of seniors (make them familiar with computer as a tool for communication - Skype, for writing - WORD, for buying - Internet banking and buying etc.

E-senior- aim of the project is presentation of opportunities offered by the use of computer, Internet and other modern technologies by seniors. http://www.e-senior.b4ngo.pl

B.5.2 CYPRUS

1) Up-skiling elders in digital health literacy to prevent marginalization and exclusion *https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-TR01-KA204-059639*
2) eHealth Eurocampus *https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-FR01-KA203-023932*
3) CERF- Certification standard for European reference framework key competences *https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2011-1-GR1-LEO05-06795*
4) Feeling younger by getting Older *https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/EST-2012-1-IT2-GRU06-37127*
5) Empower active ageing *https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2015-1-BG01-KA204-014316*

6) Online portal and active learning system for senior citizens in Europe
   https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2014-1-PT01-KA204-001044
7) Tablet – based cognitive gaming platform for seniors
   https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-TR01-KA204-058258
8) Promotion of active digital ageing skills
   https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-CY01-KA204-046895
9) iCARE
   https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2015-1-EL01-KA202-014051
10) Connect with ICT
    https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/EST-2011-1-TR1-LEO04-24538
11) Boosting adult career management and key competences for inclusion and employability through social media
    https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-FR01-KA204-024066
12) Motivation of elderly persons who are not used to education for an informal search for information
    https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/EST-2008-1-DE2-GRU06-00050
13) Apps for Carers
    https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-SE01-KA204-022067
14) Promotion of Active Digital Ageing Skills
    https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-CY01-KA204-046895

B.5.3 GREECE

Apps4carers: A4C targets informal carers and contributes to the wellbeing of informal carers by overcoming barriers which limit them and their care recipients from benefiting fully by learning, information and social participation opportunities offered via ICTs and especially mobile devices. (http://www.appsforcarers.eu/)

iDo Project: Innovative Digital Training Opportunities on Dementia for Direct Care Workers. The main goal of the iDO project is thus to make evidence-based knowledge available for low-skilled workers in dementia care. The project aims to translate up-to-date evidence in an accessible, motivating, engaging and innovative vocational training on dementia care for direct care workers, reaching professionals who are normally excluded from this knowledge. (http://idoproject.eu/)

innovAge: Social Innovations promoting active and healthy ageing. Aims to achieve impact in the public, private and third sectors and is built on the closest possible partnership with end users and stakeholders, including older people themselves. Its key outputs will be four new major social innovations in different EU countries and a

new European platform to promote the sustainable implementation of social innovations to promote well-being in later life. Among these four social innovations, one is explicitly thought for supporting informal carers. (http://eurocarers.org/informcare/?lang=el)

B.5.4 ITALY

- IHEAL - UP-SKILLING ELDERS IN DIGITAL HEALTH LITERACY TO PREVENT MARGINALIZATION AND EXCLUSION, 1 November 2018 – 31 October 2020
  More info: http://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-TR01-KA204-059639
- BREAKING DIGITAL BARRIERS: BUILDING DIGITAL LITERACY FOR ELDERLY, 1 October 2018 – 30 September 2020
  More info: http://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-TR01-KA204-058309
- SKILLS INNOVATION TRAINING, 1 October 2016 – 30 September 2018
  More info: http://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-UK01-KA204-024267
- PROMOTION OF ACTIVE DIGITAL AGEING SKILLS, 1 November 2018 – 31 October 2020More info: http://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2018-1-CY01-KA204-046895
- APPS4CARERS, 2016-2018
  More info: http://www.appsforcarers.eu/

HORIZON 2020:

- IC-HEALTH – IMPROVING DIGITAL HEALTH LITERACY IN EUROPE,

More info: https://ichealth.eu/

In Italy there are also numerous national, regional and local projects. Here some examples:

- Nonni in Rete

  More info: http://www.mondodigitale.org/it/aree-intervento/invecchiamento-attivo-e-solidariet%C3%A0-intergenerazionale/nonni-in-rete

- Nonni su Internet

  More info: http://www.mondodigitale.org/it/cosa-facciamo/aree-intervento/invecchiamento-attivo/nonni-su-internet

B.5.5 BULGARIA

Search through more recent Erasmus+ funded projects shows some projects in which Bulgaria was also featured as a partner:

1) ‘‘Feeling younger by getting older’’ which addresses the issue of life-long learning with some of the project’s topics being in the field of ICTs tools for a better ageing (online services for healthcare, transport, social services, adult learning).

Source:

http://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/EST-2012-1-IT2-GRU06-37127

2) ‘‘Empower Active Ageing’’ (Strategic Partnerships for adult education)

Source: https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2015-1-BG01-KA204-014316

3) ‘‘Connect with ICT’’ - "Connect with ICT" consortium will actively research a definite set of guiding principles relating to information and communication technologies and accessibility for disabled older people

Source: https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/EST-2011-1-TR1-LEO04-24538

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