

**Title:** COLlaborative Research on AGEing in Europe

**Acronym:** COURAGE in EUROPE

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## **Summary:**

One of the most pressing policy issues in the 21st century for the European Commission certainly is the need for valid and reliable measures to describe population ageing. COURAGE in Europe is a three-year project involving 12 partners from 4 European Countries and the World Health Organization. It was inspired by the need to respond to the pressing need to integrate international studies on disability and ageing in light of an innovative perspective based on a validated data-collection protocol.

COURAGE in Europe project has now developed original survey protocol for European studies on ageing and disability with specific tools to evaluate the role of the built environment and social networks as determinants of health and disability on an ageing population. The main survey to evaluate the determinants has been conducted by the partners in Finland, Poland and Spain where the survey has been administered to a sample of 10800 persons and was completed in March 2012.

COURAGE in Europe created a valid and reliable scientific evidence based on health, well being, functional status, quality of life and disability in ageing, that is comparable across countries in Europe and internationally. It validated the research protocol in the general population of Spain, Finland and Poland – countries selected to give a broad representation across different European regions, taking into consideration their population and health characteristics (median age, life expectancy and sex ratio). The differences in socio-economic gradients between Poland, Spain and Finland provide opportunities to compare the effects of social security mechanisms and ageing outcomes.

## **Background:**

The increase in the proportion of older people in Europe is the result of unprecedented economic, social, medical and technological changes that have made it possible for Europeans to live a long and active life. In Europe, the percentage of persons older than 60 was 20.3% (3.0 for 80+) in 2000 and will rise to 28.8% (5.2% for 80+) in 2025, and the median age will rise from 37.7 to 45.4: the old age dependency ratio (i.e. the number of persons 65+ per one hundred persons 15-64) will rise from 21.7 to 33.2.

If, on one side, these demographic trends are fairly well understood, the huge political and social changes that they will produce are less well understood. Should we expect that future populations will live long and active lives, with severe disability occurring only at the very end of life – a phenomenon called ‘compression of morbidity’? Or should we rather expect that the ageing population will experience increasingly high prevalence of mild and moderate disability for a longer period – a phenomenon called ‘expansion of morbidity’? Both these ageing scenarios have huge, but very different, political and social consequences. If compression of morbidity is true, then we should expect cost savings (as older populations work longer), reducing pension costs and contributing through income taxation to help pay health and other social expenses. If, instead, expansion of morbidity is true, then the overall health and social costs will be far higher as cross-the-board costs will increase in health, rehabilitation and assistive technology services, in employment, transportation and communication accessibility modifications and in other accommodations designed to decrease the burden of disability.

Reliable and valid instruments that measure health outcomes (both physical and mental), quality of life, and well-being in an ageing population are needed. Previous studies did not clearly address the mechanisms that purport to explain the linkages between health, quality of life and well-being, because they rely on measures that do not discriminate these constructs, dramatically undermining their validity. This fact underscores the necessity to measure health, functional status, disability, quality of life and well-being independently and against the background of International Classification of Functioning, Disability and Health (ICF) model. The ICF makes it possible to define individual levels of health in terms of objective states of capacities to function in a given set of domains, whereas a person's quality of life is entirely a matter of their subjective appraisal of those states irrespective of the actual level of health; well-being is a function both of a person's subjective satisfaction with various aspects of life as well as his/her current affective state measured as a time-weighted metric of amount of negative or positive emotions. The biopsychosocial model of ICF offers the possibility to collect information on a person's health and on his / her environment looking at the facilitating or hindering interaction.

## **Aim:**

COURAGE in Europe has pursued four main objectives:

1) To develop valid assessment instruments to measure key health and health-related outcomes in the general population (from age 18 to end of life). The aim was to build linkages with existing national and cross-national ageing studies in (or including) Europe, such as the Study of Health, Ageing and Retirement in Europe (SHARE), WHO's Study on Global Ageing and Adult Health (SAGE), Measuring Health and Disability in Europe: supporting policy development (MHADIE), European Community Health Indicators (ECHI), and the Mental Health Disability: An European Assessment Study (MHEDEA).

2) Validation of the assessment instrument, which is mindful of the need to create a scientific evidence base for health and disability determinants in ageing.

3) To produce substantial innovation in ageing survey methodology by including the Built Environment and Social Networks.

4) To provide cross-population analysis of non-fatal mental and physical health outcomes, quality of life, and well-being and prepare the ground for potential future longitudinal studies in Europe.

## **Results:**

The project's fieldwork has been conducted on a sample of 10800 persons from Finland (1976), Poland (4071) and Spain (4753) and was completed in March 2012. Mean unweighted age was 59.27 for Finland, 57.62 for Poland and 60.44 for Spain.

On the whole sample a trend of increase in functioning difficulties (Activities of Daily Living - ADLs, Instrumental Activities of Daily Living - IADLs, and World Health Organization Disability Assessment Scale - WHODAS based) with age and with levels of household wealth was observed, with older subjects and those with lower wealth reporting more difficulties. An inverse relationship between health state and age was observed: those with higher age also showed a lower health state. Differences among countries were also observed: respondents from Poland reported worse scores than those from Spain and Finland, which were those reporting less difficulties in ADL and IADL and in disability scores. Regarding mobility functions, in Poland, difficulties in walking 1 kilometer were much more common (56%) than in Finland (27%) and Spain (32%). Also the prevalence of the risk factors and their association with mobility limitations varied considerably between the three countries.

Quality of life, collected with World Health Organization Quality of Life in Ageing (WHOQoL-AGE) tool, developed by COURAGE, is perceived as better in Finland (77.96) and in Spain (74.38) than in Poland (68.90). The levels of quality of life decrease with the increase of age, and in Poland this decreasing is significantly higher. When related with income levels it was observed that quality of life, for all age groups and in all countries, increases with the increase of income.

With regard to Well-Being index, differences among countries were observed: people from Finland showed the highest well-being, and those from Poland the lowest. Spain scored in between. Life evaluation worsened along the life span, whereas the affect tended to improve: positive affect increased and negative affect decreased in Finland and Spain. In Poland negative affect increased with age.

Social Networks Index (SNI) was calculated and analyzed in relation to demographic characteristics. It was found that worse social networks are associated with higher age. Higher level of education is associated with better social networks. Finally, better levels of social networks are related with living in rural places. Social policy should focus on maintaining existing and on building new social networks among people in older age. People should intensify their social network to preserve their, health. Several possible determinants of social network (e.g. built environment) should be taken into consideration.

The newly developed COURAGE Built Environment Assessment Tools includes the COURAGE Built Environment Self-reported Questionnaire (CBE-SR) – a self-reported instrument that captures person-environment interaction – and the COURAGE Built Environment Outdoor Checklist (CBE-OUT) – aimed to assess the features of the physical environment in the neighborhoods of the respondents. CBE-SR results show that there are age-related and health-related trends: those reporting good or very good health reported a better persons-environment interaction (i.e. an environment which is more usable, accessible and friendly) than those with moderate or bad health; those younger than 50 perceived their neighborhood environment as more usable. Country-specific differences were found in the objective evaluation of built environment: Spain reported the best scores (55.62), followed by Poland (52.50) and the worst scores correspond to Finland (48.13), meaning that environment was assessed as more facilitating in Spain than in Finland.

The project and its results as well as the COURAGE Protocol for Ageing Studies were presented and disseminated in several international conferences (posters, oral presentations, leaflet distribution), in particular during the International COURAGE in Europe International Conference and satellite symposium (November 27th-29th, 2012).

## **Potential applications:**

Current ageing studies generally focus on the impact of specific diseases, or on some genetic markers that are connected to ageing, as well as the complex mechanisms that underline the inflammatory pattern. Unfortunately, the majority of these findings are not likely to be immediately transferrable into intervention procedures. An aspect which is particularly interesting in COURAGE in Europe project's research is that targeted environmental factors, such as built environment and social network, can be modified through appropriate interventions. The connection between such factors, objective health status and subjective dimensions, such as quality of life and well-being, will enable policy makers to expand the range of possible actions that address the problem of ageing in Europe.

The newly developed and validated COURAGE Protocol for Ageing Studies has proven to be a valid tool for collecting comparable data in ageing population and COURAGE in EUROPE Project created valid and reliable scientific evidence for

disability and ageing research and policy development, that showed cross-country comparability. It is therefore recommended that future studies exploring determinants of health and disability in ageing use COURAGE-derived methodology.

**Project web-site:** [www.courageproject.eu](http://www.courageproject.eu)

**Key words:** Ageing, determinants of health, cross-population study, quality of life, well-being, built environment, social networks

<p>Project Coordinator</p>  <p><b>Fondazione IRCCS Istituto Neurologico Carlo Besta (INNCB)</b>  <u>Matilde Leonardi</u>  Via Celoria, 11  20133 Milano (Italy)  Phone: +39 02 23942511  Fax: +39 02 23942442  Email: leonardi@istituto-besta.it</p>	
 <p><b>World Health Organization (WHO)</b>  <u>Somnath Chatterji</u>  Via Appia, 20  1211 Genève (Switzerland)  Phone: +41 22 7913202  Fax: +41 22 7914328  Email: chatterjis@who.int</p>	 <p><b>Terveyden ja hyvinvoinnin laitos (THL)</b>  <u>Seppo Koskinen</u>  Mannerheimintie, 166  00300 Helsinki (Finland)  Phone: +358 20 610 8762  Fax: +358 20 610 8760  Email: seppo.koskinen@thl.fi</p>
 <p><b>Universidad Autonoma de Madrid (UAM)</b>  <u>Jose Luis Ayuso-Mateos</u>  c./ Arzobispo Morcillo, 4  28029 Madrid (Spain)  Phone: +34 91 497 27 16  Fax: +34 91 497 27 16  Email: joseluis.ayuso@uam.es</p>	 <p><b>Parc Sanitari Sant Joan de Déu (SJD-SSM)</b>  <u>Josep Maria Haro</u>  Calle Doctor Antoni Pujades, 42  08830 Barcelona (Spain)  Phone: +34 936009751  Fax: +34 936009771  Email: jmharo@fsjd.org</p>
 <p><b>Provincia Lombardo Veneta Ordine Ospedaliero di San Giovanni di Dio Fatebenefratelli (FBF)</b>  <u>Giovanni B. Frisoni</u>  Via Pilastroni, 4  25125 Brescia (Italy)  Phone: +39 030 3501 361  Fax: +39 02 700 435 519  Email: gfrisoni@fatebenefratelli.it</p>	 <p><b>Associazione la Nostra Famiglia – IRCCS Istituto Scientifico “Eugenio Medea” (MEDEA)</b>  <u>Andrea Martinuzzi</u>  Via Don Luigi Monza, 20  22037 Ponte Lambro (Italy)  Phone: +39 0438 414296  Fax: +39 031 877499  Email: andrea.martinuzzi@cn.inf.it</p>
 <p><b>Agenzia per i Servizi Sanitari n. 5 “Bassa Friulana” (ARS)</b>  <u>Lucilla Frattura</u>  Via Nativone  33057 Ialmicco UD (Italy)  Email: lucilla.frattura@regione.fvg.it</p>	 <p><b>Uniwersytet Jagiellonski (JUMC)</b>  <u>Beata Tobiasz-Adamczyk</u>  Sw Anny, 12  31008 Krakow (Poland)  Phone : 0048 12 422 31 82  Fax: 0048 12 422 87 95  Email: mytobias@cyf-kr.edu.pl</p>
 <p><b>PBS DGA Spolka Z O.O. (PBS-DGA)</b>  <u>Michal Gmurek</u>  Ul. Junakow, 2  81-812 Sopot (Poland)  Email: jakub.jerz@pbsdga.pl</p>	 <p><b>Ipsos Operaciones (IPSOS)</b>  <u>Ramon Serrano</u>  Alcala, 96 – 28009 Madrid (Spain)  Phone : +34 91 383 42 51  Fax: +34 91 383 42 51  Email: ramon.serrano@ipsos.com</p>
 <p><b>CF Consulting Finanziamenti Unione Europea S.r.l. (CFc)</b>  <u>Carla Finocchiaro</u>  Via Giuseppe Mussi, 1  20154 Milan (Italy)  Phone: +39 02 310 833 1  Fax: +39 02 3361 4064  Email: carla.finocchiaro@cf-c.it</p>	 <p><i>A European Commission project funded within the Seventh Framework Programme Number HEALTH-F2-2009-223071</i></p>  <p><b><i>www.courageproject.eu</i></b></p>