INTRODUCTION

Currently, healthcare and life sciences ecosystems are moving towards an open data approach. This evolving paradigm is based on an interplay of clinical and population databases that are shared to encourage universal participation, interoperability of databases and to push forward research and innovation.

SHARE (Survey of Health, Ageing, and Retirement in Europe) is an European cross-national panel database, which includes detailed questions on demographics, health, social network and economic status from representative samples of the community-based population. SHARE data is available to entire research community for scientific research, free of charge, and is subjected to European Union and national data protection laws. It’s last wave (data from 2017) covers 27 European countries, with data of about 140,000 individuals aged over 50, which allows consistent international comparisons and provides a dynamic picture of ageing in Europe. SHARE is harmonized with the US Health and Retirement Study (HRS) and the English Longitudinal Study of Ageing (ELSA) and has become a role model for several ageing surveys worldwide. Thus, SHARE represents a great source of open data for research.

AIMS

In this work we want to focus our experience using SHARE. We have recently reported the overall prevalence of frailty (7.7%) and pre-frailty (42.9%), polypharmacy (32.1%), difficulty in medication intake (2.1%), and physical inactivity (12.5%) over 50+ people in Europe, and its associated variables. These prevalences were unequal across countries. We also reported a prevalence of cognitive impairment of 28.0% for perceived memory, 27.89% for verbal fluency and 20.75% for numeracy, and an association between low cognitive function and cardiovascular risk factors. By identifying a broad spectrum of variables related to specific conditions and understanding patterns about European health status, useful cost-effective large-scale interventions and policies can be developed to improve the quality and sustainability of the health system.

MATERIALS & METHODS

Our group has a wide experience using SHARE. We have recently reported the overall prevalence of frailty (7.7%) and pre-frailty (42.9%), polypharmacy (32.1%), difficulty in medication intake (2.1%), and physical inactivity (12.5%) over 50+ people in Europe, and its associated variables. These prevalences were unequal across countries. We also reported a prevalence of cognitive impairment of 28.0% for perceived memory, 27.89% for verbal fluency and 20.75% for numeracy, and an association between low cognitive function and cardiovascular risk factors. By identifying a broad spectrum of variables related to specific conditions and understanding patterns about European health status, useful cost-effective large-scale interventions and policies can be developed to improve the quality and sustainability of the health system.

RESULTS

![Prevalence of polypharmacy in older adults based on the survey of health, ageing and retirement in Europe](image)

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RESULTS

**Physical inactivity among older adults across Europe based on the SHARE database**

![Fig. 3 Prevalence of physical inactivity in older people 55+ across Europe](image)

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![Fig. 1 Prevalence of polypharmacy in older people (65+) among 17 European countries and Israel.](image)

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![Fig. 2 Prevalence of frailty status across Europe. Pre-frailty (A) and Frailty (B) status across Europe.](image)

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CONCLUSIONS

SHARE database has great potential to scientific community since it ensembles a huge amount of open data from community-dwelling older people. Therefore, it allows us, research community, to find answers to the societal challenges that we face due to demographic transition, to make suggestions for stakeholders and to search for tailored-interventions in older community-dwelling promoting well-being and an active and healthy ageing, in a low-cost and fast way.

Nevertheless. It also has some limitations: it is self-reported, the sampling procedure could influence some of the results and people with more disabilities might not have been included. Nevertheless, it is a source of free data and a sample of elderly European population.