contact@saveage.eu
www.saveage.eu

SAVE AGE: Energy Efficient Behaviour Of Residents And Employees In RCHEP

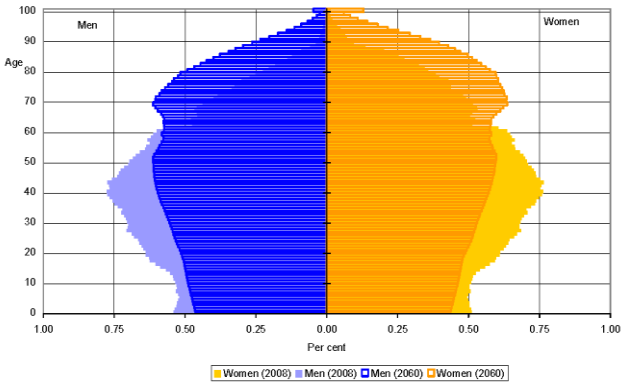
A literature review of 2000 references in 37 articles and books made clear that the changing of energy-related behaviour can potentially save about 19% (±5%) of our energy consumption. These savings are due to changes in conservation, lifestyle, awareness, low-cost actions, and small investments.

For the first time in Europe a behavioural analysis has been carried out, focused on energy efficiency in 100 pilot residential homes in the 10 countries that participate in the SAVE AGE project. SAVE AGE aims to raise awareness in order to change behaviour of homes' staff and residents to reach more energy efficiency. Reducing energy consumption in RCHEPs is important because of the aging of European population and because these centres operate 24 hours a day, 365 days a year, with full occupancy. In these centres, the use of lighting and air conditioning can account for up to 80% of the energy bill.

According to the Eurostat's 2008-based national population projections (EUROPOP2008), the EU's population will be much older than it is now, those aged 65 years or over will account for more than 30.0% of the EU's population by 2060 (17.1% in 2008). Another aspect of population ageing is the progressive ageing of the older population itself. The share of those aged 80 years or above in the EU-27's population is projected to almost triple by 2060, from 21.8 million in 2008 to 61.4 million in 2060.

As a result, the EU's old age dependency ratio is projected to more than double from 25.6% in 2009 to 53.5% by 2060.

Population pyramids, EU27, 2008, 2060



Source: Eurostat, EUROPOP2008 convergence scenario

Energy behaviour is either investment or habitual behaviour. The former typically involves the adoption of a new technology, perhaps the purchase of a new appliance. Habitual behaviour is routine behaviour, such as turning the lights off when leaving a room. In that sense the results of the SAVE AGE behaviour analysis show that in most RCHEPs lights are on depending on the day light, or just when somebody is in the room, but at 22% of the RCHEPs the lights are always on even when nobody is in the room.

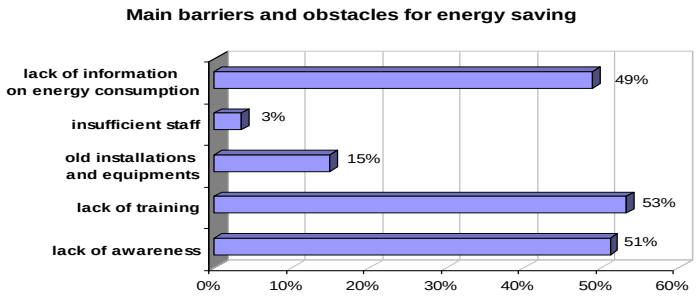
Other examples of inefficient routine behaviours that can be changed are:

- Cooking fire is on standby mode or on lowest heat in the kitchens of some RCHEPs in Portugal.
- Food is kept hot in electric wagons for more than two hours in 7 RCHEPs in Germany.
- Refrigerators are checked for ice just when it needs to be removed, mainly in RCHEPs in Italy and Spain.
- As for hot water use for dish washing, hot taps remain open very often even when no water is used in 2 RCHEPs in Italy and the Czech Republic.

contact@saveage.eu
www.saveage.eu

- Regarding laundry washing, very hot water (90ºC) is used in 30% of washing runs, in Greece and Slovenia greater percentages of washing runs are carried out at this temperature.
- Windows remain open for ventilation for more than two hours in some RCHEPs in Portugal, Greece, Germany, and Italy. Moreover, heating or cooling systems are always or almost always on while ventilating rooms in 47% of the RCHEPs, mainly in France, Greece, Italy and Germany.
- Almost half of the RCHEPs (42%) do not have any periodic maintenance program to check installations and equipment; and the maintenance type in 29% of the RCHEPs is only corrective, if the equipment is out of order.
- Energy contracts are rarely or never reviewed in 32% of the RCHEPs.
- Only 8% of the RCHEPs have training plans for employees and users regarding energy efficiency.
- In most RCHEPs the information on energy consumption of appliances and ways to save energy is not available for employees and residents.

As main conclusion of the SAVE AGE study, we can say in general, that there is an important lack of information and knowledge on energy efficiency among personnel (including managers and staff) and residents in the RCHEPs. This can also lead to a lack of awareness related to energy efficiency and savings. Awareness at all levels of the organization (management, maintenance, staff, residents, etc.) is the most effective measure in achieving the savings targets.



The interviewees consider the lack of information, lack of training and lack of awareness as the main barriers and obstacles for energy efficiency in the RCHEPs. One of the factors influencing the behaviour is motivation. These include awareness, knowledge, social influence, attitude, perceived capabilities and intention.

To intentionally change their energy behaviour, people must raise awareness of their energy use, pay attention to it and be informed about the consequences of energy wast.