Longitudinal Urban Cohort Ageing Study

Subproject 1:
Ageing of the longitudinal cohort in Hamburg

Background: There will be a significant increase in both the number and proportion of old and oldest old people in the population. However, little is still known about normal ageing, and about health promotion in older age.

Aims: To investigate factors that are relevant to maintain functional competence, to prevent long-term disability and to minimise unnecessary service utilisation among older people. (1) Therefore, periodic assessments are performed covering information on functional status (fit, pre-frail, frail), health behaviour, health care use, the need of long-term care, and survival over a period of more than 10 years. (2) Long-term effects of randomised (RCT) health promotion intervention will be evaluated. There were two approaches (a) small group sessions "Active health promotion in old age", and (b) home visits.

Methods: For this purpose, 3,326 independently living community-dwelling elderly people (60 years and over) were recruited from 21 general practices in 2000 (baseline). They were followed up over a ten year period until 2010 resulting in multidimensional data sets for every single participant at baseline, 1 year, 7 year and 9 year follow up.

Results: To our knowledge, LUCAS is the first long-term project of an initially non-disabled urban cohort in Germany that was designed in an interdisciplinary process. The re-recruitment in 2007 for 7 year and 9 year follow ups were successful. The drop out rates averaged less than 5 percent per year since baseline. Predominant causes were death and moving away. By the end of this funding phase (2010) there were nearly 2000 participants still in this longitudinal cohort. A new classification of functioning (definitions to the terms fit, prefrail and frail) was successful.

Conclusions: The participants of the longitudinal cohort participants have been engaged in this multidimensional study with embedded intervention approaches for more then 10 years. The high interest will facilitate the work on target group specific assessments and analyses to enlighten the ageing process.

Longitudinal Urban Cohort Ageing Study

Subproject 1:
The Longitudinal Urban Cohort Ageing Study (LUCAS) in the metropolitan city of Hamburg:

The LUCAS II TP 1 aims were 1.) to quantitatively describe functional ageing in an urban cohort of independent community-dwelling older people; 2.) to evaluate long-term effects of a randomised controlled trial (RCT) consisting of (a) health promoting intervention (Program: "Active Health Promotion in Old Age / Aktive Gesundheitsförderung im Alter") and (b) preventative intervention (home visits); 3.) to evaluate implications on the need of professional care (long-term care), 4.) to use data from the longitudinal cohort for validation of screenings, assessments, and performance tests, 5.) to evaluate validity of the LUCAS waves 2007, 2009 and 2012, as compared to representative cross-sectional studies in the older Hamburg population.

Results: 1.) The self-administered LUCAS functional ability index was developed. This index is based equally on both, resources and risks/functional restrictions which precede ADL limitations (4 classes: Fit, pre-Frail 1 und 2, Frail) with high predictivity for (a) future functional decline, (b) need of nursing care, and (c) mortality. 2.) + 3.) Almost across the 4 classes, participants of the intervention group had longer survival and retarded need of nursing care. 4.) Validity investigation of the self-administered LUCS functional ability screening with gerontological-geriatric assessments clearly showed that age per se does not discriminate between the functional classes. The functional classes differ in mobility performance, risk of falling, IADL, comorbidity and medication use. 5.) The portions of women and men from the LUCAS longitudinal cohort are equivalent to corresponding parts of the older Hamburg population. The results from the LUCAS waves are in accordance with those from representative cross-sectional studies.

The LUCAS cohort results add to those from other cohort studies in Germany and Europe. The LUCAS functional ability index facilitates to early detect incipient functional decline - e.g. in GPs' practices and senior health centers - to initiate appropriate target group specific preventive actions. This will help to positively influence the need of care in older age.

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