ILSE - The Interdisciplinary Longitudinal Study of Adult Development and Aging

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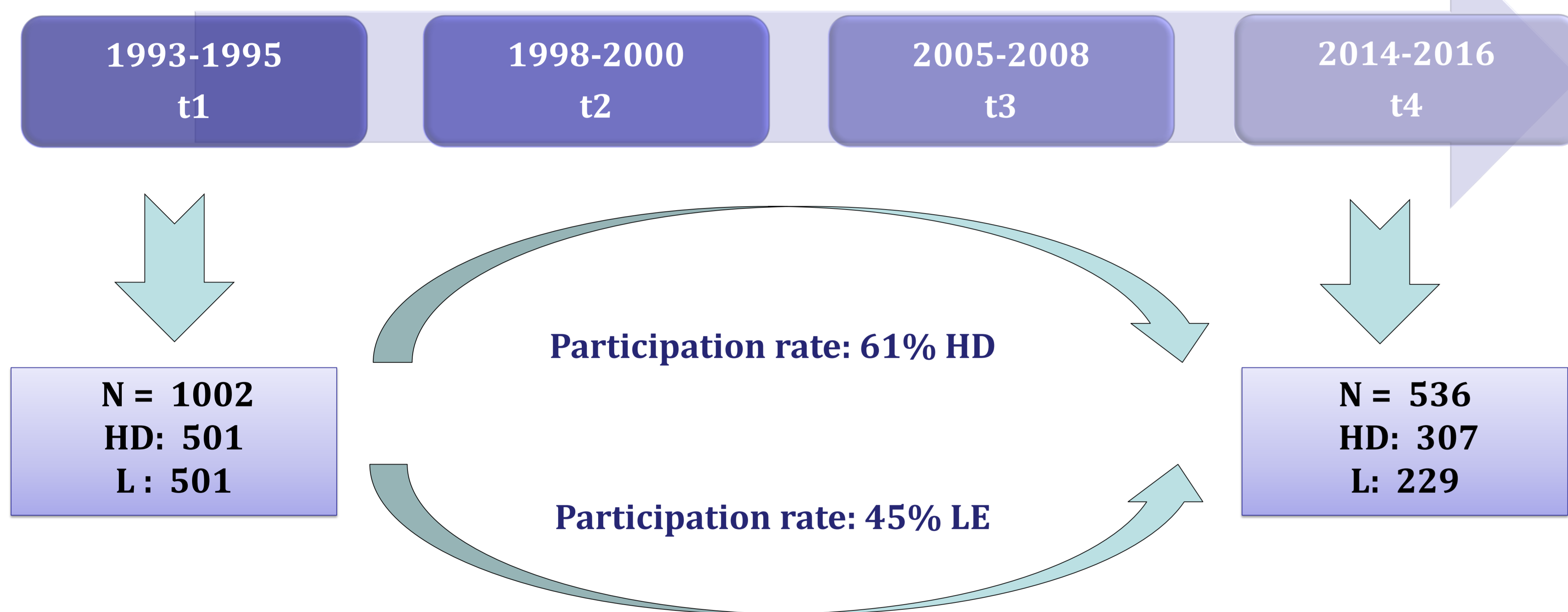[1]University Hospital Heidelberg, Section of Geriatric Psychiatry; [2]Heidelberg University, Institute of Gerontology; [3]Institute of General Practice, Goethe University, Frankfurt am Main; [4]Institute of Psychology, Heidelberg University

Design of the study: The main objective of the Interdisciplinary Longitudinal Study on Adult Development and Aging (ILSE) is to investigate the longitudinal course of aging with respect to the potential risk and protective factors involved [1]. ILSE is designed as a multidisciplinary longitudinal study and involves **two birth cohorts in two** regions Leipzig (Saxony; former east) and Heidelberg (former west) Germany

　　500 participants from the 1930/32 cohort
　　502 participants from the 1950/52 cohort

Observation periods: Subjects were investigated in four examination waves (t1-t4) at age 40 vs. 60; 45 vs. 65; and 55 vs. 75. At the current fourth examination wave subjects are 63 vs. 83 years old [2,3].

1993-1995 t1	1998-2000 t2	2005-2008 t3	2014-2016 t4

Participation rate: 61% HD

Participation rate: 45% LE

N = 1002
HD: 501
L : 501

N = 536
HD: 307
L: 229

Areas of investigation	Measuring instrument
Medical and psychiatric examination	• Self-anamnesis, physical examination, blood samples, Structured Clinical Interview according to DSM-III-R (SKID) [4], Magnetic Resonance Imaging (MRI) [5](…)
Neuropsychological examination	• Intelligence, memory, attention, processing speed, word fluency, dementia screening (…)
Questionnaires and socio-demographic data	• Attitude and personality, leisure activities and physical activities and abilities, nutrition, subjective well-being, life satisfaction, depression (…)
Semi-standardized biographical interviews	• Autobiographical narrative of different life stages (e.g. childhood memories, recent past)

ILSE-Audio-Corpus: Biographical semi-standardized interviews of speech recording, from four examination waves between 1993 and 2016. The duration of an interview at t1 is between 4-6h; duration at t2-t4: approximately 30-180 min.

Interview-guidelines for all measurements:

• Theme stability with high inter-individual comparability (e.g. memories of childhood, recent past, public events (world war II, reunification), job, social networks, health (current state of health, activities), financial situation, housing situation, future (ideas, wishes or worries).
• Open questions as a stimulus for free telling
• Goal: comprehensive insight into the life situation
• Beginning: biography or changes since the last measurement
• Adapted to the life situation at the respective measurement

Data: t1-t2: analogue recording devices, interviews **on tape** 8200 h (48 kHz)

　　ca. 5300 h are already **digitalized**

　　t3: digital recording device, **MP3** format (44.1 kHz)
　　t4: digital recording device, **MP3** format (16 kHz)

Transcription: more than 360 h are already transcribed for a total of 74 participants interviewed by 19 Interviewers convention: basic transcription (GAT 2)

Scientific interest:

• Detailed longitudinal analysis of individual aging and speech
• Study of inter-individual differences along the dimensions of region, gender and birth cohort
• To compare adults from the western and eastern parts of Germany
• Age-related changes in autobiographical memory
• Changes in speech expression due to medical conditions (e.g. Mild cognitive impairment or Alzheimer's dementia) [6]
• Longitudinal changes in memory and story telling
• Speech and speech profiles during aging
• Research on the aging of voices across gender, health status, and dialect

References:
[1] www.psychologie.uni-heidelberg.de/ae/apa/research/ilse.html [27.02.2017]
[2] Sattler C., Toro, P., & Schröder, J. (2012). Cognitive activity, education and socioeconomic status prevent MCI and Alzheimer's disease. *Psychiatry Research, 196*, 90–95.
[3] Schönknecht, P., Pantel, J., Kruse, A. & Schröder, J. (2005). Prevalence and natural course of aging associated cognitive decline in a population based sample of „young-old" subjects. Am J Psychiatry, 11, 2071–7.
[4] Wittchen, H.-U., Schramm, E., Zaudig, M., Spengler, P., Rummler, R., Mombour, W. (1989). *SKID: Strukturiertes Klinisches Interview für DSM-III-R*. Weinheim: Beltz Verlag.
[5] Degen C, Toro P, Schönknecht P, Sattler C, Schröder J (2016). Diabetes mellitus Type II and cognitive capacity in healthy aging, mild cognitive impairment and Alzheimer's disease. *Psychiatry Research, 240*, 42-46.
[6]Wendelstein B. (2016). *Gesprochene Sprache im Vorfeld und in frühen Stadien der Alzheimer-Demenz. Eine Linguistische Analysen im Verlauf von präklinischen Stadien bis zur leichten Demenz*. Winter, Heidelberg.