

Availability Frailty Index in the Longitudinal Aging Study Amsterdam

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In the Longitudinal Aging Study Amsterdam (LASA), a 32-item frailty index has been operationalized as of wave C, based on data from the LASA main interview. This frailty index was validated for predicting mortality, and has been used in longitudinal studies:

Hoogendijk, E.O., Theou, O., Rockwood, K., Onwuteaka-Philipsen, B.D., Deeg, D.J.H., & Huisman, M. (2017). Development and validation of a Frailty Index in the Longitudinal Aging Study Amsterdam. *Aging Clinical and Experimental Research*, 29, 927-933. DOI: 10.1007/s40520-016-0689-0

Hoogendijk, E.O., Rockwood, K., Theou, O., Armstrong, J.J., Onwuteaka-Philipsen, B.D., Deeg, D.J.H., & Huisman, M. (2018). Tracking changes in frailty throughout later life: results from a 17-year longitudinal study in the Netherlands. *Age and Ageing*, 47, 727-733. DOI: 10.1093/ageing/afy081

Unfortunately, in longitudinal studies sometimes changes are being made in questionnaires or measurement instruments. This is also the case for LASA. Therefore, it is not possible to use the original 32-item frailty across all cohorts and waves. However, depending on the purpose of your study, an adapted frailty index may be used:

- For cross-sectional studies: at any wave, a 30-, 31- or 32-item frailty index can be used.
- For longitudinal studies starting at wave C, the original 32-item frailty index can be used
- For longitudinal studies starting at wave B, a 31-item frailty index can be used.
- For cohort comparisons of young olds (B, 2B and 3B), a 31-item frailty index can be used.
- For comparisons between the migrant cohort and native Dutch cohort (MB and 3B), a 30-item frailty index can be used.

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LASA Wave	Year	Cohort	Frailty Index
B	1992-1993	Cohort 1	Adapted, 31-item frailty index
C	1995-1996	Cohort 1	Original 32-item frailty index
D	1998-1999	Cohort 1	Original 32-item frailty index
E	2001-2002	Cohort 1	Original 32-item frailty index
2B	2002-2003	Cohort 2	Original 32-item frailty index
F	2005-2006	Cohort 1, 2	Original 32-item frailty index
G	2008-2009	Cohort 1, 2	Original 32-item frailty index
H	2011-2012	Cohort 1, 2	Original 32-item frailty index
3B	2012-2013	Cohort 3	Original 32-item frailty index
MB	2013-2014	Migrant cohort	Adapted, 30-item frailty index
I	2015-2016	Cohort 1, 2, 3	Original 32-item frailty index
J	2018-2019	Cohort 1, 2, 3	Original 32-item frailty index

The frailty index is not a fixed measure. As long as frailty index methodology is being followed (Searle et al, 2008*), researchers are free to adapt the frailty index, or to add items from the LASA medical interview to create a larger frailty index (however, this may reduce the sample size, as the medical interview has a lower n than the main interview).

*Searle SD, Mitnitski A, Gahbauer EA et al (2008) A standard procedure for creating a frailty index. *BMC Geriatr* 8:24.