The Gothenburg H70 Birth Cohort Studies - H70, kohort 6: 70-year-olds born in 1930

SND-ID: ext0203-6.

Withdrawn

This version has been withdrawn and the data are no longer available from SND's research data catalogue. Please note that there may be a newer version available.

Withdrawal due to update of SND's metadata profile. All metadata from this data description is now included in https://snd.se/sv/catalogue/dataset/ext0203-1/1. No DOI has been generated by SND for the dataset.

Alternative title

H70

Creator/Principal investigator(s)

Ingmar Skoog - University of Gothenburg, Institute of Neuroscience and Physiology

Research principal

<u>University of Gothenburg</u> - Institute of Neuroscience and Physiology

Principal's reference number

kohort 1906-1907: Dnr 477 75 kohort 1911-12: Dnr 70 80 kohort 1915-16: Dnr 263-90

kohort 1930: Dnr S227 00. Dnr 377 99. Dnr Ö402 99

Description

H70 is one of the longitudinal population studies from Gothenburg where representative study samples of older adults have been followed over a long period of time (metadata related to the H85, 95+ and Prospective Population Study of Women studies can be found under the Related studies tab). H70 is a population-based study of aging in 70-year-old populations which focuses on both medical and cognitive measures.

The examination procedures at each study have been retained as identical as possible to provide results that can be compared over time. The study comprises a psychiatric interview, physical examination, psychological tests, blood samples with extensive laboratory analysis and a close informant interview. It also includes collecting data related to socioeconomic status, marital status, living conditions, housing situation, education, religion, hobbies and life events. Neurobiological investigations in the form of computed tomography (CT) and magnetic resonance imaging (MRI) of the brain and spinal puncture and analysis of brain-spinal fluid are also carried out. Medical records from all major hospitals, geriatric and psychiatric institutions and outpatient clinics in Gothenburg are evaluated to find cases of psychiatric and somatic diseases. Dementia, depression, psychotic disorders, sleep disorders, anxiety disorders, and post-traumatic stress disorder (PTSD) are diagnosed according to DSM-III-R and DSM-IV. Somatic diseases are classified according to established criteria.

Purpose:

The original aim was:

- 1. To contribute to the knowledge of normal ageing processes and of normal conditions within the age group
- 2. To make a survey of the social and medical conditions of the population.
- 3. To obtain basic data for planning the care of the older adults
- 4. To offer the subjects a thorough medical examination

At the 2000-01 baseline examination 574 individuals participated (243 men and 331 women), which represents a response rate of 65% in total. Study participants were followed up at age 75 and 79. Surveys have been conducted in 2000, 2005, 2009, 2015-16 and 2018. Re-examinations are planned for 2021.

The examination procedures at each study have been retained as identical as possible to provide results that can be compared over time. The study comprises a psychiatric interview, physical examination, psychological tests, blood samples with extensive laboratory analysis and a close informant interview. It also includes collecting data related to socioeconomic status, marital status, living conditions, housing situation, education, religion, hobbies and life events. Neurobiological investigations in the form of computed tomography (CT) and magnetic resonance imaging (MRI) of the brain and spinal puncture and analysis of brain-spinal fluid are also carried out. Medical records from all major hospitals, geriatric and psychiatric institutions and outpatient clinics in Gothenburg are evaluated to find cases of psychiatric and somatic diseases. Dementia, depression, psychotic disorders, sleep disorders, anxiety disorders, and post-traumatic stress disorder (PTSD) are diagnosed according to DSM-III-R and DSM-IV. Somatic diseases are classified according to established criteria.

Data contains personal data

Yes

Sensitive personal data

Yes

Type of personal data

Psydonymised data related to mental and physical health, as well as socio-demographics and social relationships

Code key exists

Yes

Language

English

Swedish

Unit of analysis

Individual/Patient

Population

The population originally consisted of a representative sample of 70-year-old men and women born in

1901/1902 and living in Gothenburg 1971/1972.

Study design

Observational study

Cohort study

Cohort study: Prospective

Description of study design

H70 started in 1971 with the recruitment of 973 70-year-olds born in 1901-02 and participants have been intermittently followed for up to 30 years. Additional birth cohorts of 70-year-olds as well as 75-year-olds have also been studied and all cohorts have been followed to some extent longitudinally.

Sampling procedure

Probability: Systematic random

The study participants were mainly drawn as a representative, systematic sample from the population register.

Time period(s) investigated

2000 - Ongoing

Biobank is connected to the study

The study has collected samples/material which are stored in a scientific collection or biobank Scientific collection or biobank name: Biobanken på Neurokemi Lab, SU/Mölndal, Socialstyrelsens nummer 532, reg-datum 2005-03-17

Type(s) of sample: Blood tests and brain imaging (MRI)

Data format / data structure

Numeric

Geographic spread

Geographic location: Sweden

Geographic description: Gothenburg

Responsible department/unit

Institute of Neuroscience and Physiology

Commissioning organisation

University of Gothenburg - University of Gothenburg

Ethics Review

Gothenburg - Ref. kohort 1906-1907: Dnr 477 75 kohort 1911-12: Dnr 70 80 kohort 1915-16: Dnr 263-90 kohort 1930: Dnr S227 00, Dnr 377 99, Dnr Ö402 99

Research area

Medical and health sciences (Standard för svensk indelning av forskningsämnen 2011)

Geriatrics (Standard för svensk indelning av forskningsämnen 2011)

<u>Gerontology, specialising in medical and health sciences</u> (Standard för svensk indelning av forskningsämnen 2011)

Keywords

Care of the elderly, Aged, Ageing, Health, Old age, Housing for the elderly, Human behaviour, Quality of life, Medical care, Ill health, Medicinal drugs, Diseases, Dental health, Smoking, Physical mobility, Sexual behavior, Life events, Symptoms, Cardiovascular diseases, Nutritional and metabolic diseases, Cancer, Bacterial and virus diseases, Public health, Oral health, Mental health, Sexual health, Medical history, Genetic disorders, Haematologic diseases, Skin diseases, Endocrine disorders, Congenital disorders, Musculoskeletal diseases, Eye diseases, Ear diseases, Anthropometric data, Respiratory system, Haematologic system, Cardiovascular system, Immune system, Psychology, Activities of daily living, Accidental falls, Physical examination, Epidemiologic methods, Body constitution, Visual perception, Dementia, Tooth diseases, Hearing, Psychiatry, Geriatric psychiatry, Life style, Geriatrics, Geriatric nursing, Memory, Longitudinal studies, Motor activity, Exercise, Psychological tests, Socioeconomic factors, Sexuality, Survival, Thyroid diseases, Risk factors, Mortality, Neoplasms, Ear diseases, Respiratory system, Public health, Physical fitness, Cardiovascular diseases, Oral health, Mental health, Disease, Social conditions, Social support, Quality of life, Chronic disease, Injuries, Cognition disorders, Sensory impairments, Ageing population, Public health risks, Bereavement, Social care, Height (physiology), Exercise (physical activity), Weight (physiology), Near- national einfrastructure for aging research

Publications

Liebetrau M, Hamann GF, Skoog I. White matter lesions as a risk factor for stroke and dementia. Nervenarzt 2005;76:708-715.

DOI: https://doi.org/10.1007/s00115-004-1832-2

Rinder L, Roupe S, Steen B, Svanborg A. Seventy-year-old people in Gothenburg. A population study in an industrialized Swedish city. Acta Med Scand. 1975 Nov;198(5):397-407.

DOI: https://doi.org/10.1111/j.0954-6820.1975.tb19563.x.

Nilsson L, Persson G. H70 Hälsoundersökning av 70-åringar i Göteborg. Mentalt hälsotillstånd. Läkartidn 1980;77:3757-3759.

Persson G. Life event ratings in relation to sex and marital status in a 70-year-old urban population. Acta Psychiatr Scand 1980;62:112-118.

DOI: https://doi.org/10.1111/j.1600-0447.1980.tb00599.x

Persson G. Personality dimensions in a 70-year-old urban population. Norms for the MNT scales and sex and age relations. Acta Psychiatr Scand 1980;62:476-485.

DOI: https://doi.org/10.1111/j.1600-0447.1980.tb00636.x

Persson G. Prevalence of mental disorders in a 70-year-old urban population. Acta Psychiatr Scand 1980;62:119-139.

DOI: https://doi.org/10.1111/j.1600-0447.1980.tb00600.x

Persson G. Psychogenic needs in a 70-year-old population. Norms for the CMPS and sex and age relations. Acta Psychiatr Scand 1980;62:464-475.

DOI: https://doi.org/10.1111/j.1600-0447.1980.tb00635.x

Persson G. Relation between early parental death and life event ratings among 70-year-olds. A test of

a sensitization theory. Acta Psychiatr Scand 1980;62:392-397.

DOI: https://doi.org/10.1111/j.1600-0447.1980.tb00625.x

Persson G. Sexuality in a 70-year-old urban population. J Psychosom Res 1980;24:335-342.

DOI: https://doi.org/10.1016/0022-3999(80)90025-2

Berg S, Mellström D, Persson G, Svanborg A. Loneliness in the Swedish aged. J Gerontol 1981:36:342-349.

DOI: https://doi.org/10.1093/geronj/36.3.342

Persson G. Five-year mortality in a 70-year-old urban population in relation to psychiatric diagnosis, personality, sexuality and early parental death. Acta Psychiatr Scand 1981;64:244-253.

DOI: https://doi.org/10.1111/j.1600-0447.1981.tb00780.x

Nilsson L. Mental diseases in an urban population examined at the age of 70 and 5 years later. Nordisk Gerontologisk Tidskrift, Norsam-Nyt Suppl 1982;42-43.

Nilsson LV. Prevalence of mental disorders in a 70-year-old urban sample. A cohort comparison. J Clin Exp Gerontology 1983;5:101-120.

Persson G, Nilsson LV, Svanborg A. Personality and sexuality in relation to an index of gonadal steroid hormone balance in a 70-year-old population. J Psychosom Res 1983;27:469-477.

DOI: https://doi.org/10.1016/0022-3999(83)90035-1

Nilsson LV, Persson G. Prevalence of mental disorders in an urban sample examined at 70, 75 and 79 years of age. Acta Psychiatr Scand 1984;69:519-527.

DOI: https://doi.org/10.1111/j.1600-0447.1984.tb02526.x

Nilsson LV. Incidence of severe dementia in an urban sample followed from 70 to 79 years of age. Acta Psychiatr Scand 1984;70:478-486.

DOI: https://doi.org/10.1159/000213272

Frändin K, Grimby G, Mellström D, Svanborg A. Walking habits and health-related factors in a 70-year-old population. Gerontology 1991; 37: 281-8.

DOI: https://doi.org/10.1159/000213272

Persson G, Svanborg A. Marital coital activity in men at the age of 75: relation to somatic, psychiatric, and social factors at the age of 70. A prospective study on a representative material. J Am Geriatr Soc 1992;40:439-444.

DOI: https://doi.org/10.1111/j.1532-5415.1992.tb02007.x

Sonn U, Frändin K, Grimby G. Instrumental activities of daily living related to impairments and functional limitations in 70-year-olds and changes between 70 and 76 years of age. Scand J Rehab Med 1995; 27: 119-28.

: PMID: 7569821

Palsson SP, Östling S, Skoog I. The incidence of first-onset depression in a population followed from the age of 70 to 85. Psychol Med 2001;31:1159-1168.

DOI: https://doi.org/10.1017/s0033291701004524

Ruitenberg A, Skoog I, Ott A, Aevarsson O, Witteman JC, Lernfelt B, van Harskamp F, Hofman A, Breteler MMB. Blood Pressure and Risk of Dementia: Results from the Rotterdam Study and the Gothenburg H-70 Study. Dement Geriatr Cogn Disord 2001;12:33-39.

DOI: https://doi.org/10.1159/000051233

Silveira E, Skoog I, Sundh V, Allebeck P, Steen B. Health and well-being among 70-year-old migrants living in Sweden – results from the H70 gerontological and geriatric population studies in Göteborg. Soc Psychiatry Psychiatr Epidemiol 2002;37:13-22.

DOI: https://doi.org/10.1007/s127-002-8209-5

Bergh I, Steen G, Waern M, Sjöström B, Odén A, Steen B. Pain and depressive symptoms in 70-year old men and women: A Swedish population study. Journal of pain and symptom management 2003;26:903-912.

DOI: https://doi.org/10.1016/s0885-3924(03)00329-4

Guo X, Matousek M, Sonn U, Skoog I, Björkelund C, Steen B. A longitudinal study on changes of movement performance and their relation to medical conditions in a female population followed from age 70 to 78. Arch Gerontol Geriatr 2003;36:127-140.

DOI: https://doi.org/10.1016/s0167-4943(02)00083-3

Skoog I. Psychiatric epidemiology of old age: the H70 study - the NAPE Lecture 2003. Acta Psychiatr Scand. 2004;109:4-18.

DOI: https://doi.org/10.1046/j.1600-0447.2003.00260.x

Rockwood K, Mitnitski A, Song X, Steen B, Skoog I. Long-term risks of death and institutionalisation of elderly people in relation to deficit accumulation at age 70. J Am Ger Soc 2006;54:975-979.

DOI: https://doi.org/10.1111/j.1532-5415.2006.00738.x

Östling S, Pálsson S, Skoog I. The incidence of first-onset psychotic symptoms and paranoid ideation in a representive population sample followed from age 70 to 90 years. Relation to mortality and later development of dementia. Int J Geriatr Psychiatry 2007;22:520-528.

DOI: https://doi.org/10.1002/gps.1696

Beckman N, Waern M, Gustafson D, Skoog I. Secular trends in self reported sexual activity and satisfaction in Swedish 70 year olds: cross sectional survey of four populations, 1971-2001. Brit Med J 2008; 337:151–154.

DOI: https://doi.org/10.1136/bmj.a279

Duberstein PR, Palsson SP, Waern M, Skoog I. Personality and risk for depression in a birth cohort of 70-year-olds followed for 15 years. Psychological Medicine 2008;38:663-671.

DOI: https://doi.org/10.1017/S0033291707002620

Karlsson B, Klenfeldt IF, Sigstrom R, Waern M, Ostling S, Gustafson D, Skoog I. Prevalence of social phobia in non-demented elderly from a swedish population study. Am J Geriatr Psychiatry 2009;17:127-135.

DOI: https://doi.org/10.1097/jgp.0b013e3181860051

Sigström R, Skoog I, Sacuiu S, Karlsson B, Fredén Klenfeldt I, Waern M, Gustafson D, Östling S. The prevalence of psychotic symptoms and paranoid ideation in a non-demented population sample of 70-82 year olds. Int J Ger Psychiatry 2009;24:1413-1419.

DOI: https://doi.org/10.1002/gps.2278

Sacuiu S, Gustafson D, Johansson B, Thorvaldsson V, Berg S, Sjögren M, Guo X, Östling S, Skoog I. The pattern of cognitive symptoms predicts time to dementia onset. Alz & Dem 2009;5:199-206.

DOI: https://doi.org/10.1016/j.jalz.2008.10.007

Karlsson B, Sigström R, Waern M, Östling S, Gustafson D, Skoog I. The Prognosis and Incidence of Social Phobia in an Elderly Population. A 5-Year Follow-up. Acta Psych Scand 2010; 122:4-10.

DOI: https://doi.org/10.1111/j.1600-0447.2010.01559.x

Sacuiu S, Gustafson D, Sjögren M, Guo X, Östling S, Johansson B, Skoog I. Secular changes in cognitive predictors of dementia and mortality in 70-year-olds. Neurology 2010;75(9):779-85.

DOI: https://doi.org/10.1212/WNL.0b013e3181f0737c

Olesen PJ, Gustafson DR, Simoni M, Pantoni L, Ostling S, Guo X, Skoog I. Temporal Lobe Atrophy and White Matter Lesions are Related to Major Depression over 5 years in the Elderly. Neuropsychopharmacology 2010;35(13):2638-45.

DOI: https://doi.org/10.1038/npp.2010.176

Nilsson J, Karlsson B, Sigström R, Waern M, Östling S, Guo X, Skoog I. The prevalence of Generalized Anxiety Disorder according to DSM-IV and ICD-10 among non-demented 75-year-olds in Gothenburg, Sweden. Am J Ger Psychiatry (in press).

Sigström R, Ostling S, Karlsson B, Waern M, Gustafson D, Skoog I. A population-based study on phobic fears and DSM-IV specific phobia in 70-year olds. J Anxiety Disord. 2011;25(1):148-53.

DOI: https://doi.org/10.1016/j.janxdis.2010.08.014

Kern S, Skoog I, Ostling S, Kern J, Börjesson-Hanson A. Does low-dose acetylsalicylic acid prevent cognitive decline in women with high cardiovascular risk? A 5-year follow-up of a non-demented population-based cohort of Swedish elderly women. BMJ Open. 2012 Oct 3;2(5). doi:pii: e001288. 10.1136/bmjopen-2012-001288. Print 2012. PubMed PMID: 23035037; PubMed Central PMCID: PMC3488756.

DOI: https://doi.org/10.1136/bmjopen-2012-001288

Lak V, Guo X, Skoog I. Secular trends in lung function and its relation to survival in Swedish 75-year olds 1976-2006. Age Ageing. 2012 Nov;41(6):735-40.

DOI: https://doi.org/10.1093/ageing/afs098

Mosallanezhad Z, Hörder H, Salavati M, Nilsson-Wikmar L, Frändin K. Physical activity and physical functioning in Swedish and Iranian 75-year-olds – a comparison. Arch Gerontol Geriatr 2012; 55(2): 422-30.

DOI: https://doi.org/10.1016/j.archger.2012.02.007

Nilsson J, Östling S, Waern M, Karlsson B, Sigström R, Guo X, Skoog I. The 1-Month Prevalence of Generalized Anxiety Disorder According to DSM-IV, DSM-V, and ICD-10 Among Nondemented 75-Year-Olds in Gothenburg, Sweden. Am J Geriatr Psychiatry. 2012 Nov;20(11):963-72. doi: 10.1097/JGP.0b013e318252e749.

DOI: https://doi.org/10.1097/JGP.0b013e318252e749

Thorvaldsson V, Skoog I, Hofer SM, Börjesson-Hanson A, Ostling S, Sacuiu S, Johansson B. Nonlinear blood pressure effects on cognition in old age: separating between-person and within-person associations. Psychol Aging. 2012 Jun;27(2):375-83. Epub 2011 Oct 10.

DOI: https://doi.org/10.1037/a0025631

Billstedt E, Waern M, Duberstein P, Marlow T, Hellström T, Östling S, Skoog I. Secular changes in personalty: study of 75-year-olds examined in 1976-1977 and 2005-2006. In J Geriatr Psychiatry 2013;28(3):298-304.

DOI: https://doi.org/10.1002/gps.3825

Hörder H, Skoog I, Frändin K. Health-related quality of life in relation to walking habits and fitness: a population-based study of 75-year-olds. Qual Life Res 2013; 22(6):1213-23. doi: 10.1007/s11136-012-0267-7.

DOI: https://doi.org/10.1007/s11136-012-0267-7

Sjöberg L, Östling S, Waern M, Falk H, Skoog I. Secular changes in the relation between depression and social factors. A study of two birth cohorts of Swedish septuagenarians followed for 5 years. J Affect Disord. 2013 Sep 5;150(2):245-52. doi: 10.1016/j.jad.2013.04.002. Epub 2013 Apr 30.

DOI: https://doi.org/10.1016/j.jad.2013.04.002

Waern M, Marlow T, Östling S, Morin J, Skoog I. Secular changes in at-risk drinking in Sweden: Birth cohort comparisons in 75-year-old men and women 1976-2006. Age Ageing. 2014 Mar;43(2):228-34. doi: 10.1093/ageing/aft136. Epub 2013 Sep 25.

DOI: https://doi.org/10.1093/ageing/aft136

Wiberg P, Waern M, Billstedt E, Östling S, Skoog I. Secular trends in the prevalence of dementia and depression in Swedish septugenarians 1976- 2006. Psychol Med. 2013 Dec;43(12):2627-34. doi: 10.1017/S0033291713000299. Epub 2013 Mar 12.

DOI: https://doi.org/10.1017/S0033291713000299

Landahl S, Lindblad B, Roupe S, Steen B, Svanborg A. Digitalis therapy in a 70-year-old population. Acta Med Scand. 1977;202(6):437-43.

DOI: https://doi.org/10.1111/j.0954-6820.1977.tb16861.x

Steen B, Isaksson B, Svanborg A. Intake of energy and nutrients and meal habits in 70-year-old males and females in Gothenburg, Sweden. A population study. Acta Med Scand Suppl. 1977;611:39-86.

DOI: https://doi.org/10.1111/j.0954-6820.1977.tb18069.x

Steen B, Bruce A, Isaksson B, Lewin T, Svanborg A. Body composition in 70-year-old males and females in Gothenburg, Sweden. A population study. Acta Med Scand Suppl. 1977;611:87-112.

DOI: https://doi.org/10.1111/j.0954-6820.1977.tb18070.x

Landahl S, Jagenburg R, Svanborg A. Blood components in a 70-year-old population. Clin Chim Acta. 1981 May;112(3):301-14.

DOI: https://doi.org/10.1016/0009-8981(81)90453-8

Mellström D, Rundgren A, Jagenburg R, Steen B, Svanborg A. Tobacco smoking, ageing and health among the elderly: a longitudinal population study of 70-year-old men and an age cohort comparison. Age Ageing. 1982 Feb;11(1):45-58.

DOI: https://doi.org/10.1093/ageing/11.1.45

Nilsson-Ehle H, Jagenburg R, Landahl S, Svanborg A, Westin J. Haematological abnormalities and reference intervals in the elderly. A cross-sectional comparative study of three urban Swedish population samples aged 70, 75 and 81 years. Acta Med Scand. 1988;224(6):595-604.

: PMID: 3264660

Nilsson-Ehle H, Jagenburg R, Landahl S, Svanborg A, Westin J. Decline of blood haemoglobin in the aged: a longitudinal study of an urban Swedish population from age 70 to 81. Br J Haematol. 1989 Mar;71(3):437-42.

DOI: https://doi.org/10.1111/j.1365-2141.1989.tb04303.x

Nilsson-Ehle H, Jagenburg R, Landahl S, Svanborg A. Blood haemoglobin declines in the elderly:

implications for reference intervals from age 70 to 88. Eur J Haematol. 2000 Nov;65(5):297-305.

DOI: https://doi.org/10.1034/j.1600-0609.2000.065005297.x

Nilsson L, Skoog I. H-70 - de äldres hälsa. Fler resultat från projektet: Psykiska störningar. Läkartidningen 1989;86:2773-2774.

Rydberg Sterner, T., Ahlner, F., Blennow, K., Dahlin-Ivanoff, S., Falk, H., Havstam Johansson, L., Hoff, M., Holm, M., Hörder, H., Jacobsson, T., Johansson, B., Johansson, L., Kern, J., Kern, S., Machado, A., Mellqvist Fässberg, M., Nilsson, J., Ribbe, M., Rothenberg, E., ... Skoog, I. (2019). The Gothenburg H70 Birth cohort study 2014-16: design, methods and study population. European Journal of Epidemiology, 34(2), 191–209. https://doi.org/10.1007/s10654-018-0459-8

URN: urn:nbn:se:hkr:diva-18848

DOI: https://doi.org/10.1007/s10654-018-0459-8

Zhi X, Joas E, Waern M, Östling S, Börjesson-Hanson A, Skoog I. Prevalence of cardiovascular disorders and risk factors in two 75-year-olds birth cohorts examined in 1976-77 and 2005-06. Aging Clin Exp Res. 2013 Aug;25(4):377-83. doi: 10.1007/s40520-013-0058-1. Epub 2013 Jun 4.

DOI: https://doi.org/10.1007/s40520-013-0058-1

Hörder H, Skoog I, Frändin K. Health-related quality of life in relation to walking habits and fitness: a population-based study of 75-year-olds. Qual Life Res. 2013 Aug;22(6):1213-23. doi: 10.1007/s11136-012-0267-7. Epub 2012 Sep 22.

DOI: https://doi.org/10.1007/s11136-012-0267-7

Fredén Klenfeldt I, Karlsson B, Sigström R, Waern M, Östling S, Marlow T, Gustafson D, Skoog I. Prevalence of Obsessive-compulsive Disorder in Relation to Depression and Cognition in an Elderly Population. Am J Geriatr Psychiatry. 2014 Mar;22(3):301-8. doi: 10.1016/j.jagp.2012.09.004. Epub 2013 Mar 13.

DOI: https://doi.org/10.1016/j.jagp.2012.09.004

Homepage

NEAR platform - The Gothenburg H70 Birth Cohort Studies

The study homepage

Apply for NEAR data

Contact for questions about the data

Anna Zettergren

anna.zettergren@neuro.gu.se

This resource has the following relations

Is obsoleted by H70

Download metadata

DataCite

DDI 2.5

DDI 3.3

DCAT-AP-SE 2.0

JSON-LD
PDF
Citation (CSL)