

psychological factors on the trajectory from cognitive healthy. A multi-method approach is used, including the development of a conceptual framework for social health and its application in epidemiological and qualitative studies. Epidemiological studies in the SHARED project reveal potentially modifiable social health characteristics or markers associated with cognitive decline, dementia and mortality. This may shape new avenues for future interventions to prevent or delay cognitive decline and dementia and to enhance living well with dementia.

Conceptual framework for social health: identification of modifiable and protective and risk factors

Authors: Myrra Vernooij-Dassen, Eline Verspoor, Suraj Samtani, Perminder S Sachdev, M. Arfan Ikram, Meike W. Vernooij, Claudia Hubers, Rabih Chattat, Marta Lenart-Bugla, Joanna Rymaszewska, Dorota Szczesnia, Henry Brodaty, Anna-Karin Welmer, Jane Maddock, Isabelle F van der Velpen, Henrik Wiegelman, Anna Marseglia, Marcus Richards, Rene Melis, Marjolein de Vugt, Esme Moniz-Cook, Yun-Hee Jeon, Marieke Perry, Karin Wolf-Ostermann AND INTERDEM taskforce social health

Objective: The recognition of dementia as a multifactorial disorder encourages the exploration of new pathways to understand its origins. Social health might play a role in cognitive decline and dementia, but conceptual clarity is lacking and this hinders investigation of associations and mechanisms. Social health might provide a new perspective on social connectedness. The objective is to develop a conceptual framework for social health to advance conceptual clarity in future studies and to identify potentially modifiable risk and protective factors in the “Social Health And Reserve in the Dementia patient journey (SHARED)” project.

Methods: The methods include the process of building the conceptual framework. We used the following steps: underpinning for concept advancement, concept advancement by the development of a conceptual model, and exploration of its potential feasibility.

Results: Underpinning of the concept drew from a synthesis of theoretical, conceptual and epidemiological work, and resulted in the definition of social health as well-being that relies on capacities both of the individual and the social environment. In the conceptual framework the abstract definition has been elaborated into more precisely defined domains at both the individual and the social environmental levels. This allowed to identify domain related social health characteristics or markers in epidemiological data bases and to investigate associations between these markers and cognitive decline and dementia. The associated social health markers represent potentially modifiable risk and protective factors. Examples are “social engagement” in the participation domain at the individual level, and “frequency of contact” in the structure domain, “exchange of support” in the function domain and “loneliness” in the appraisal domain at the environmental level. The conceptual framework facilitated identification of domain related markers in the SHARED project, thus showing its potential feasibility.

Discussion: The conceptual framework provides guidance for future research and facilitates identification of potentially modifiable risk and protective factors. These may shape new avenues for preventive interventions. We highlight the paradigm of social health in dementia as a priority for dementia research.

How to measure social health in the context of cognitive decline and dementia - A systematic review on instruments.

Authors: Henrik Wiegelmann^{1*}, Marta Lenart-Bugla², Myrra Vernooij-Dassen³, Eline Verspoor³, Imke Seifert¹, Dorota Szczesniak², Joanna Rymaszewska², Rabih Chattat⁴, Yun-Hee Jeon⁵, Esme Moniz-Cook⁶, Martina Roes⁷, Marieke Perry³, **Karin Wolf-Ostermann¹**

¹Department of Nursing Science Research, Institute of Public Health and Nursing Research, University of Bremen, 28359 Bremen, Germany;

²Department of Psychiatry, Wroclaw Medical University, 50-367 Wroclaw, Poland; marta.lenart@umw.edu.pl (M.L.B.), dorota.szczesniak@umw.edu.pl (D.S.), joanna.rymaszewska@umw.edu.pl (J.R.)

³ Radboud University Medical Center, Radboud Institute for Health Sciences, Radboudumc Alzheimer Center, 6525 XZ Nijmegen, The Netherlands; myrra.vernooij-dassen@radboudumc.nl (M.V.D.), eline.verspoor@radboudumc.nl (E.V.), marieke.perry@radboudumc.nl (M.P.)

⁴ Department of Psychology, Alma Mater Studiorum - University of Bologna, 40127 Bologna, Italy; rabih.chattat@unibo.it (R.C.)

⁵ Susan Wakil School of Nursing and Midwifery, The University of Sydney, Sydney, NSW 2006, Australia; yun-hee.jeon@sydney.edu.au (Y.H.J.)

⁶ Faculty of Health Sciences, University of Hull, HU6 7RX, Hull, UK; e.d.moniz-cook@hull.ac.uk (E.M.C.)

⁷ Department of Nursing Science, Faculty of Health, University of Witten/Herdecke, 58453 Witten, Germany; martina.roes@uni-wh.de (M.R.)

* Correspondence: hwiegelmann@uni-bremen.de; Tel. +49 421-218-68962

First authors: Henrik Wiegelmann, Marta Lenart-Bugla

Last authors: Karin Wolf-Ostermann, Marieke Perry

Background: Besides aspects of physical and mental health and quality of life aspects the concept of social health is getting increasing attention in dementia research. Current research has led to a new umbrella concept of social health and first studies show relationships between social health markers and cognitive decline and dementia. But so far, no general overview exists how to measure social health in empirical studies.

Objective: The objective of this study therefore is to provide a systematic overview of instruments measuring aspects of social health and proposing a classification based on the new umbrella concept of social health.

Methods: Following the PRISMA 2020 guidelines a systematic review was conducted. The online search covered the databases PubMed/MEDLINE, PsychINFO, CINAHL within a publication period from 1st January 2000 till 15th October 2020 for English publications. To classify instruments a new multidimensional framework of social health was used.

Results: A total of 150 studies with 68 single instruments were included into the study. A broad range of study types was covered (i.e., feasibility studies, cross-national panel studies) from all over the world, with the majority of studies being conducted in the USA. Most of the described instruments consist of self-report measures, but also proxy and hybrid tools were found. The length of the instruments in terms of the number of single items ranged from 3-126 items, with a median length of 13 items. On the individual level of social health with the three domains *capacities*, *autonomy* and *social participation* we classified 42 instruments and on the social environment level with the three domains *structure*, *functions* and *appraisal* we classified 53 instruments. A large part of the identified instruments only addresses single aspects of social health and does not address the multidimensionality of the concept.

Conclusion: A structured overview of measures related to the conceptual framework of social health can help develop appropriate interventions for people with dementia and improve the conditions for living well with dementia. Furthermore, the creation of new standardized and terminologically consistent measures of social health is one of the tasks for future research in the field of social health.

Social connections and risk of incident mild cognitive impairment, dementia, and mortality in 13 longitudinal cohort studies of ageing

Authors: Gowsaly Mahalingam, Suraj Samtani, Ben Chun Pan Lam, Darren M Lipnicki, Maria Fernanda Lima-Costa, Sergio Luis Blay, Erico Castro-Costa, Xiao Shifu, Maëleann Guerchet, Pierre-Marie Preux, Antoine Gbessemehlan, Ingmar Skoog, Jenna Najar, Therese Rydberg Sterner, Nikolaos Scarmeas, Mary Yannakoulia, Themis Dardiotis, Ki-Woong Kim, Steffi Riedel-Heller, Susanne Röhr, Alexander Pabst, Suzana Shahar, Katya Numbers, Mary Ganguli, Tiffany F. Hughes, Ching-Chou H, Chang, Michael Crowe, Tze Pin Ng, Xinyi Gwee, Denise Qian Ling Chua, (representatives from SHARED work packages, Joanna Rymaszewska, Karin Wolf-Ostermann, Anna-Karin Welmer, Jean Stafford), Myrra Vernooij-Dassen, Yun-Hee Jeon, Perminder S Sachdev, **Henry Brodaty**, on behalf of the SHARED consortium for the Cohort Studies of Memory in an International Consortium (COSMIC)