

# Building and Harmonising Tools for Early Cognitive Change



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## About the topic

Recent studies suggest that the actual prevalence of cognitive impairment in the population is significantly higher than suggested by the official statistics. Cognitive reserve, namely, a lifelong-developed capacity that enables individuals to maintain cognitive performance in everyday functioning and formal assessment despite underlying brain pathology, has been shown to support quality of life. However, this same capacity may delay timely diagnosis by masking the clinical manifestations of neurodegenerative disease. Early detection of symptoms of cognitive decline is critical, as it allows for timely intervention and thus prolongs the quality of life. Here, cognitive screening often serves as the “first frontier” in primary, secondary, and tertiary prevention by facilitating early detection and diagnostic accuracy. Even though there is a wide variety of cognitive screening tools available, they often come with significant limitations, such as excluding cultural, social, and sociodemographic factors, showing variable sensitivity and specificity scores, underreporting psychometric values, and overly relying on rigid cut-off points. As a result, there is a high risk of delayed diagnosis due to false negatives, thus reducing the efficiency of the care. These limitations call for a systematic evaluation of factors beyond clinical symptoms that may influence cognitive screening outcomes.

## What will be done?

The bootcamp aims to conduct a scoping review mapping evidence on how cognitive reserve and culturally related factors influence cognitive screening for neurodegenerative disease. It will examine how these factors contribute to variability in screening outcomes, including misclassification, delayed detection, and diagnostic inequities. The synthesis will inform more accurate interpretation, greater cultural sensitivity, and improved clinical utility of screening tools, while guiding future development of more equitable assessment approaches. The scoping review will address the following questions:

1. What cognitive screening tools have been examined in relation to cognitive reserve and culturally related factors?
2. How are cognitive reserve and culturally related factors defined and operationalized in the literature?
3. What cultural and socio-demographic factors have been investigated in relation to performance in cognitive screening?
4. What types of validity outcomes have been examined?
5. What methodological approaches have been used to account for cognitive reserve and cultural factors in cognitive screening?

## What will you learn?

- How to conduct a scoping review, following PRISMA ScR and Joanna Briggs Institute Methodology.
- How to map and synthesize scientific evidence on the role of cognitive reserve, cultural, and socio-demographic factors in cognitive screening.
- How to identify and evaluate cognitive screening tools and understand what makes them methodologically robust.
- How to recognise limitations and gaps in existing screening approaches.
- How to formulate evidence-based recommendations for more culturally sensitive and equitable cognitive assessment.

The Bootcamp is implemented within the project “From Community Screening to Neuroimaging: Training for Early Detection of Cognitive Decline in Baltic-German Collaboration”, funded by the Baltic-German University Liaison Office (Hochschulkontor) under the *Baltica Germanica and Innovativa* programme line.