

Mini-Mental State Examination (MMSE) as Predictor of On-Road Driving Ability



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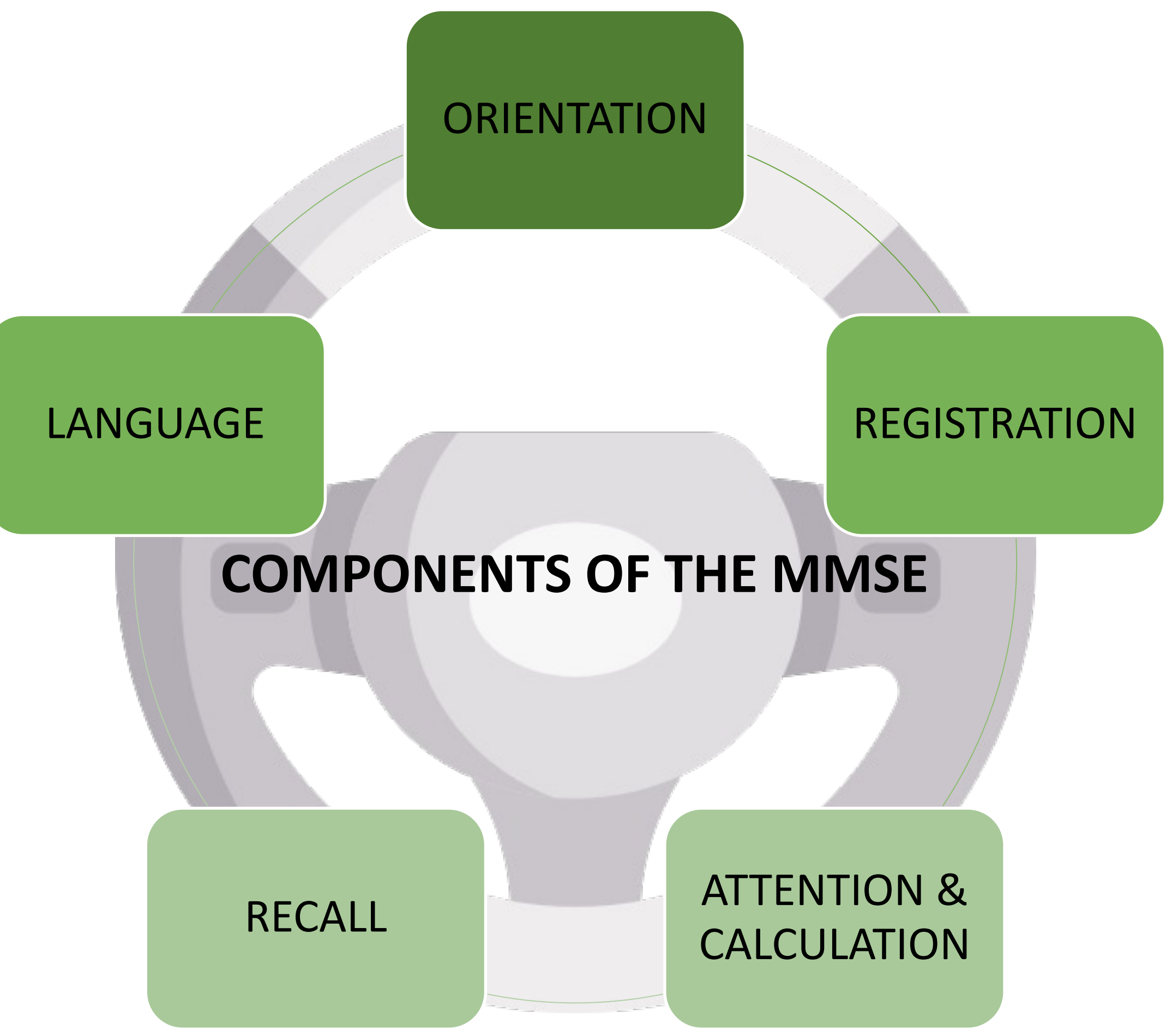
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BACKGROUND & RATIONALE

- Prevalence of Cognitive Impairment**
 - 22% of adults over the age of 65
 - Dementia, Alzheimer's, MCI, etc.
- Effects of MCI**
 - Impacts Productive Aging and Safety in Community Mobility
 - Reduced Executive Functioning
- Mini-Mental State Exam (MSSE)**
 - Commonly Used Screening Tool for Cognitive Impairment

PICO QUESTION

Does the Mini-Mental State Examination (MMSE) predict a client with mild cognitive impairment's ability to drive on the road?



SEARCH METHODOLOGY	
Search Terms Used	
P	Population: "Mild cognitive impairment", MCI, Alzheimer's, "Early onset Alzheimer's", Dementia, "Impaired cognition", TBI, "Traumatic Brain Injury", "Cognitive impairment", "Older adults", "Cognitive Deficits", "Intellectual Disabilities"
I	Intervention: "Mini Mental Status Exam", MMSE, "Mini Mental", "Cognitive Assessment"
C	Comparison: N/A
O	Outcomes: Predict ability to drive on the road, "Driving ability", "Drive on the road", "Driving Rehabilitation", "Driving Performance", "Fitness to Drive", "Driver Rehabilitation", "Driving Assessment", "Driver training"

Databases Searched	
<ul style="list-style-type: none"> CINAHL AJOT PUBMED APA 	<ul style="list-style-type: none"> COCHRANE LIBRARY SCOPUS EMBASE

Inclusion Criteria
<ul style="list-style-type: none"> Full Text Only Published within the past 15 years English On- road driving performance only

Exclusion Criteria
<ul style="list-style-type: none"> Published more than 15 years ago Simulated driving assessment Interventions Trainings Articles using MMSE only as a participant recruitment criteria

THE EVIDENCE-BASED PRACTICE PROCESS

- Step 1** • Develop PICO question based on criteria from a practitioner mentor
- Step 2** • Individually search the determined criteria and determine relevant articles
- Step 3** • Appraise the evidence for our Critically Appraised Papers (CAPs)
- Step 4** • Synthesize the evidence to develop a Critically Appraised Topic (CAT)

MAIN FINDINGS

Level 1	Level 2
<ul style="list-style-type: none"> MMSE is reliable in predicting unsafe driving MMSE is a good screener for unsafe older drivers 	<ul style="list-style-type: none"> MMSE is not a reliable identifier MMSE nor MoCA reliable indicators MMSE should not be the sole indicator
Level 3	Level 4
<ul style="list-style-type: none"> MMSE's accuracy in predicting outcomes was poor MMSE is not as sensitive in detecting cognitive impairments Weak correlation between MMSE and on-road driving 	<ul style="list-style-type: none"> Statistical and background information for need and rationale Increasing population of the elderly Importance of driving as a means of productive aging

LIMITATIONS

- Small Sample Sizes
- Selection Process
- Use of Convenience Sampling
- Limited Generalizability
- Comorbidities
- Selection Bias
- Strict Inclusion Criteria
- Possible Residual Confounding Factors

CLINICAL BOTTOM LINE



RECOMMENDATIONS FOR IMPLEMENTATION

- The findings showed **mixed results**, including both evidence for the use of the MMSE and that it should not be used as the sole indicator for fitness to drive.
- Therefore, it is recommended to use the **MMSE with caution and in conjunction with other cognitive screening** tools to determine fitness to drive.

HANDOUT & REFERENCES

