**Project: Summarizing and Analyzing Research Papers**

Submission Template

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**Topic**: Science

**Research Paper**: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=4924205

Summary of the Research Paper

Title:

"The Montreal Cognitive Assessment tool could be a useful platform for screening mild cognitive impairment in Ghana among those with at least seven years of formal education: A cross-sectional pilot study in the Cape Coast Metropolis."

Authors:

David Larbi Simpong, George Nkrumah Osei, Richeal Odarko Mills, Christopher Amaleyele Anyebem, Benjamin Kofi Aikins, Charlotte Gyanwaa Melfah, Bridget Amoanimaa Osei, Ansumana Bockarie.

Objective:

The study aims to evaluate the effectiveness of the Montreal Cognitive Assessment (MoCA) tool in screening for mild cognitive impairment (MCI) among individuals in Ghana with at least seven years of formal education.

Background:

- Dementia, particularly in low and middle-income countries like Ghana, is expected to increase. MCI is a precursor to dementia and early detection can help mitigate the progression.

- The MoCA tool is widely used and validated for assessing cognition in various populations, but its utility in the Ghanaian context needed exploration.

Methods:

- A cross-sectional analytical study was conducted with 100 participants aged 30 years and above from the Cape Coast metropolis in Ghana.

- Participants were screened using the MoCA tool, with a score below 26 indicating MCI.

- Demographic data such as age, sex, and education level were collected.

- Statistical methods included descriptive measures, two-way ANOVA, and Pearson correlation coefficient to analyze the data.

Key Findings:

1. Prevalence of MCI:

- 42% of the participants were found to have MCI.

- The highest prevalence (65.38%) was observed among the 40-49 age group.

- There was no significant difference in MCI prevalence between males (42.86%) and females (40.54%).

2. Education Level and MCI:

- A significant correlation (r = 0.608, p = 0.0001) was found between educational level and MoCA scores.

- Individuals with no formal education or primary education all had MoCA scores indicating MCI.

- Even among those with higher educational levels, MCI prevalence remained notable, suggesting the importance of cognitive reserve.

3. Cognitive Domains Affected:

- Participants with MCI performed significantly worse in visuospatial skills, attention, language, abstraction, and delayed recall.

- Orientation and naming skills were relatively preserved even in participants with MCI, indicating that these domains might be less affected in the early stages.

Conclusions:

- The MoCA tool is potentially useful for screening MCI in Ghana, particularly among those with at least seven years of formal education.

- The high prevalence of MCI among the middle-aged population (40-49 years) highlights an important public health concern.

- Further longitudinal studies are recommended to explore the progression from MCI to dementia and to identify modifiable risk factors.

Implications:

- Early identification and intervention for MCI can help reduce the burden of dementia, especially in low-resource settings like Ghana.

- Public health initiatives could focus on educational strategies and cognitive training to mitigate risks associated with low cognitive reserve.

Limitations:

- The study design was cross-sectional, limiting causal inference.

- Potential inclusion of individuals with dementia in the MCI group due to diagnostic limitations.

Funding:

- No external funding was received for this study.

Keywords:

Mild Cognitive Impairment, Dementia, Montreal Cognitive Assessment, Prevalence, Demographics.