

A Cross-sectional Study Employing MMSE and LT-GPCOG to Evaluate Cognitive Functions in Multimorbid Patients in Lithuanian Primary Care Settings

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Introduction

Conducting a cross-sectional study that employs the Mini-Mental State Examination (MMSE) and the Long-Term Care-Geriatric Primary Care Outpatient Group Cognitive Examination (LT-GPCOG) to evaluate cognitive functions in multimorbid patients in Lithuanian primary care settings presents a compelling and timely research opportunity. With an increasingly aging population in many parts of the world, Lithuania included, the assessment of cognitive impairment in multimorbid individuals is vital in guiding healthcare providers toward appropriate management strategies. Multimorbidity, or the coexistence of multiple chronic conditions, presents a significant challenge to healthcare systems, particularly in primary care settings where resources are often limited and a more holistic approach is necessary. Cognitive decline, one of the most pressing challenges faced by older populations, has significant implications for quality of life, the ability to manage daily activities and the effectiveness of medical treatments [1].

Description

The Mini-Mental State Examination (MMSE) is one of the most widely used tools for screening cognitive function, primarily assessing cognitive domains such as memory, attention, language and visuospatial abilities. Despite its simplicity and wide use, the MMSE has limitations, particularly in individuals with low education levels or those with severe cognitive impairment. The Long-Term Care-Geriatric Primary Care Outpatient Group Cognitive Examination (LT-GPCOG), on the other hand, is a more specialized tool that incorporates both cognitive function assessment and evaluations of social support and functional ability, making it more suitable for individuals with multimorbidity, who may also face challenges related to their physical and mental health. The aim of employing both MMSE and LT-GPCOG in this cross-sectional study is to offer a comprehensive assessment of cognitive health and gain insights into how cognitive decline impacts multimorbid individuals in Lithuanian primary care settings.

Lithuania, like many Eastern European countries, has experienced significant demographic shifts in recent decades, with a steadily aging population. According to the World Health Organization (WHO), Lithuania's aging population has become an increasing concern, particularly in the context of managing chronic conditions. In this population, multimorbidity is particularly prevalent, with patients often facing not just one, but multiple chronic health conditions that can complicate diagnosis, treatment and management. The association between chronic diseases and cognitive decline has been well documented in the literature, with conditions such as cardiovascular disease,

diabetes, hypertension and neurological disorders contributing to cognitive impairment and dementia in older adults. Understanding the cognitive functioning of multimorbid patients is crucial for determining their healthcare needs, optimizing treatments and improving quality of life [2].

Multimorbidity in older adults is associated with increased healthcare needs and the potential for increased complexity in managing healthcare. For example, a patient with both diabetes and hypertension might experience cognitive decline due to the combined effects of these conditions on the cardiovascular system. Furthermore, the treatment regimens required to manage these conditions can introduce polypharmacy, which has been shown to increase the risk of adverse effects and worsen cognitive functions, especially in older patients. The challenges of managing multimorbid patients are exacerbated in primary care settings, where healthcare providers are often required to address multiple health issues at once. Thus, the use of reliable and valid tools like the MMSE and LT-GPCOG is essential for properly assessing cognitive decline in this population and ensuring that appropriate treatment plans are developed [3].

The LT-GPCOG was developed as a tool specifically designed for older adults in primary care settings and focuses on a broader range of factors that can impact cognitive health. Unlike the MMSE, the LT-GPCOG takes into account the functional and social aspects of patients' lives, which are essential for understanding the overall impact of cognitive impairment. The LT-GPCOG includes questions that assess memory, executive function and language skills, but it also asks about activities of daily living and social participation, making it particularly useful in assessing individuals with multiple chronic health conditions. The tool is designed to be easy to use, even in busy primary care settings and can provide valuable information on whether cognitive decline is impacting the patient's ability to manage their health and engage in everyday activities.

The cross-sectional design of this study allows for a snapshot of cognitive function in multimorbid patients at a specific point in time, which can be useful for identifying individuals at risk for cognitive decline or those who may need further assessment or interventions. By employing both MMSE and LT-GPCOG in the study, the researchers can gather comprehensive data on cognitive function, not just by focusing on memory and executive function, but also by considering the patient's ability to perform daily tasks and engage socially. This comprehensive approach is particularly important in the context of multimorbidity, where cognitive decline may interact with other health issues, making it difficult to determine the cause of certain symptoms or identify appropriate interventions [4,5].

Conclusion

A cross-sectional study employing both MMSE and LT-GPCOG to evaluate cognitive functions in multimorbid patients in Lithuanian primary care settings has the potential to provide valuable insights into the complexities of managing cognitive impairment in this population. By assessing both cognitive function and the broader context of patients' daily lives, this study can contribute to a more comprehensive understanding of the challenges faced by multimorbid individuals. The results of this study could also inform future healthcare policies and guide healthcare providers in offering more personalized care to patients with multimorbidity and cognitive decline.

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