The Nursing Practitioner Workforce: Attitudes, Preferences and Solutions towards Aging Population with Cognitive Disorder - A Systematic Literature Review

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ABSTRACT

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Objectives: The objective of this systematic review is to comprehensively evaluate screening practices for cognitive impairment in older adults, emphasizing the critical role of nurse practitioners.

Methodology: a systematic literature search of the major databases, inclusive of PubMed, PsycINFO, and Cochrane library was carried out. The search was keywords centred on articles that dealt with cognitive impairment screening in older adults with mental health problems. Articles were carefully chosen according to the inclusion criteria such as only those articles which had been published during the last nine years and had undergone a peer-review process. Data extraction process involved identification of screening methods, participant characteristics, and major findings. The quality assessment made sure that the chosen literature was of good reliability, and data synthesis identified common factors such as similarities and differences between various studies.

Results: The search resulted to 144 articles but after intensive screening 20 of them were included in the review. Results were reported from different healthcare settings, showing both the frequency and the effectiveness of screening tools for identifying cognitive impairment. The role of nurse practitioners was identified in the selected articles, more particularly in establishment screening systems, use tools for identification, and practice advanced roles. The synthesis revealed the role of patient-centred treatment, all-rounded approaches, and the opportunity of blending cognitive screening with routine healthcare practices.

KEYWORDS: Nurse practitioners, cognitive impairment, screening tools, older adult and mental health

INTRODUCTION

The world aging population has resulted to an increase of age-related health problems which the health sector has had to deal with. Of the emanating difficulties, cognitive impairment in the elderly stands out as a critical issue, both for the patients themselves, their relatives, and the healthcare system. The early diagnosis of cognitive impairment is of vital

importance as it allows for timely intervention giving a good control over symptoms and at least slowing the rate of cognitive deterioration. Cognitive decline–from mild cognitive impairment to the severity of dementia–is a huge threat to public health. The ramifications are not only confined to the personal strata but also branches into the societal and economic levels. Recognizing cognitive decline in its initial stages may give an opportunity to apply interventions, which in the long run can improve the quality of life of the affected people and decrease the burden on healthcare systems. However, this can only be realized if appropriate screening approaches are implemented so as to accurately identify various cognitive impairments. This systematic review intends to respond to this

urgent need by analyzing the current screening practices used as a diagnostic step in the process of detecting cognitive impairment in the older adult population. This systematic review will involve synthesis of the status of cognitive impairment screening in the elderly through a critical review of an extensive range of studies, which cover an array of screening tools and methodologies. By doing this, the focus is to provide a thorough assessment of the merits and flaws of the current approaches. The exploration is underlined with the understanding that all screening methods do not perform equally in the context of aging populations and thereby demanding the use of a sophisticated analysis to establish evidence-based practices.

METHODOLOGY

Quantitative systematic review was conducted using Cochrane Collaboration systematic review methods to specify inclusion and exclusion criteria, search and retrieve relevant studies, appraise study quality, and synthesize findings.

Search Strategy and Inclusion Criteria.

In the attempt to capture the nuances of the screening practices for cognitive impairments in older adults with coexisting neuropsychiatric disorders, a systematic literature search was systematically conducted. A broad search strategy, comprising of keywords such as, "cognitive impairment", "screening tools", "older adults" and "mental health", was used for the major databases- PubMed, PsycINFO and Cochrane Library. This approach went further to create a wide net, ensuring the inclusion of multiple and relevant studies on the intersection of cognitive impairment and mental health problems among the elderly. Only peer reviewe articles which discussed screening for elderly people and particularly on mental conditions were included.

Exclusion Criteria

The exclusion criteria were applied rigorously in order to prevent the review's lack of focus and relevance. The articles not falling into the nine-year period were not included in the study to be timely and reflective of ongoing research themes. Non-peer-reviewed studies were also left out, because the objective was to draw on reliable, high-quality research and peer-reviewed. In addition, studies only focusing on one of the two, older adults and mental illness were excluded to keep the focus of the review more specific. Articles which did not apply the screening for cognitive impairment, were downscaled to provide relevant and consistent analysis of screening practices.

Data Extraction

Essential info was extracted from the studies by using a systemic and rigorous data extraction. Methodologies of screening, characteristics of the participants and results specifically to cognitive impairment screening were collected systematically. The thorough approach was undertaken in order to grab diverse spectrum of screening tools and procedures utilized in the selected studies resulting into a solid basis for further analysis.

Quality Assessment

All the articles selected were subjected to a very strict quality control as this is a key factor of reliability and validity of systematic reviews. Key components such as study methods, sample size, research design, and statistical analysis were given extensive attention. This aspect nourished the reliability of the selected literature in a huge way, thus laying a firm base for the systematic review to be conducted on top of the quality researches.
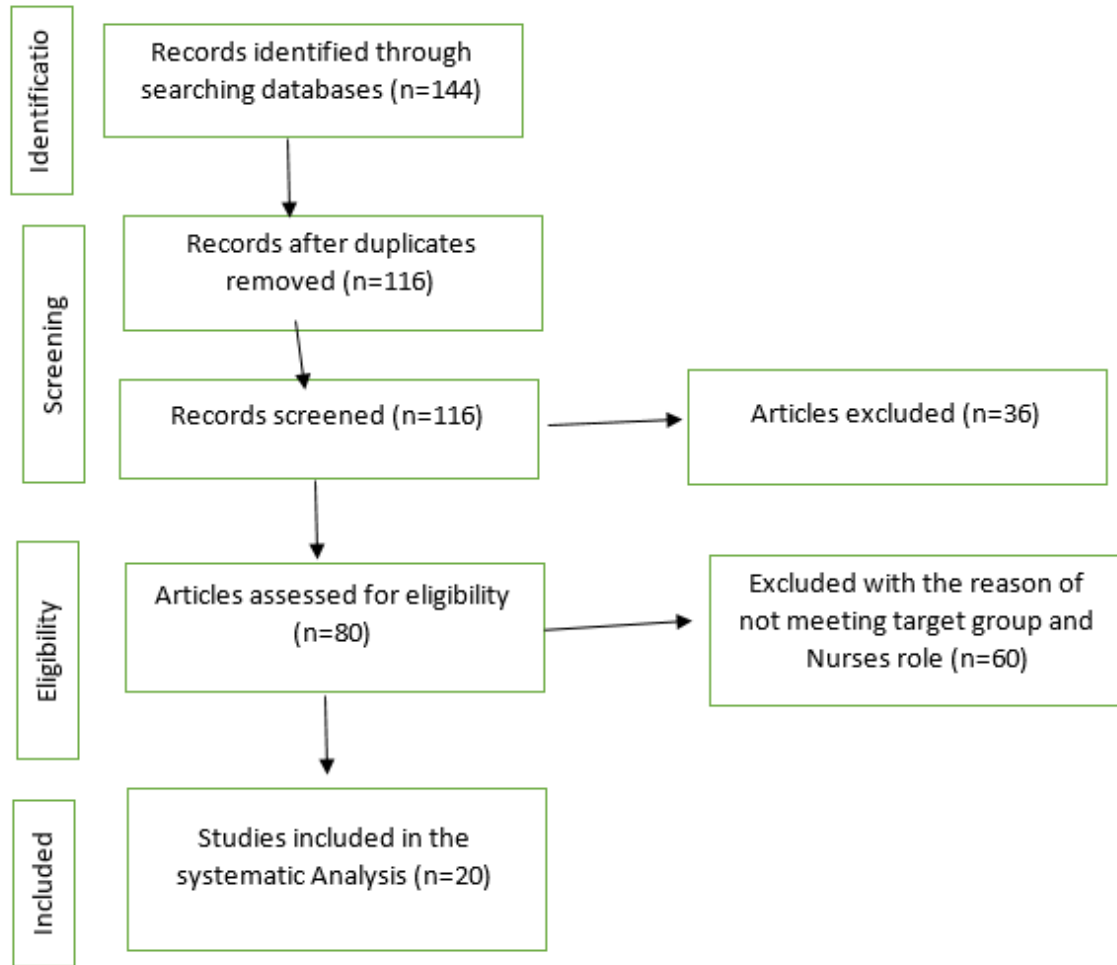
Data Synthesis

The data were synthesized using a mapping process to identify patterns and outliers in the screening practices described in the articles under review. Patterns of screening tools' effectiveness, demographic changes and emerging ideas were classified using a systematic analysis method. The synthesis thus constituted the foundation for the succeeding results and discussion sections of the systematic review, which further aimed to provide a more vivid and adequately evidence-based feedback on the status of cognitive screening practices in older adults having mental health problems.

Through a careful application of a rigorous systematic search strategy, a robust selection criteria, a detailed data extraction, and a thorough quality assessment, the present systematic review promised to provide a thorough and evidence-based investigation of cognitive impairment screening practices in geriatric population with co-existing mental health problems.

RESULTS

144 of the 9-year period articles were gotten after research. Following the process of deleting duplicates, the total number of articles became 116. From these articles, the rest were screened by the title and abstract and 35 articles were excluded due to the language, article types, and no studies' settings. At the end of the evaluation, only 20 articles were selected for this meta-analysis. This is depicted in the study selection flow diagram (PRISMA) as depicted below;

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Identification   Records identified through
                 searching databases (n=144)
                          │
                          ▼
Screening        Records after duplicates
                 removed (n=116)
                          │
                          ▼
                 Records screened (n=116) ────────▶  Articles excluded (n=36)
                          │
                          ▼
Eligibility      Articles assessed for eligibility ──▶  Excluded with the reason of
                 (n=80)                                  not meeting target group and
                                                         Nurses role (n=60)
                          │
                          ▼
Included         Studies included in the
                 systematic Analysis (n=20)
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In noting the prevalence of the mental issues, Caplan et al (2016) notes that the occurrence of cognitive impairment among elderly patients is massive. This puts a highlight on need to give proper attention that includes systematic screening, assessment and extensive workup. In doing so, the author advocates for the adoption of Personal-focused and goal-oriented screening as this is more holistic from the older adults' point of view. In the same note, Pellicer et al (2022), argue that the mostly used Mini-Mental State Examination (MMSE) in screening the mental state of elderly people tends to be biased. Therefore, as initially highlighted, there is the need to have a holistic approach to this screening process. Rosenbloom et al (2018) also evaluates the pattern of healthcare use in primary and specialty care practices in people with cognitive impairment detected during the screening. The study observed that screening alone may not be the solution as it does not change the provider actions or provider post-screening utilization. Such an observation indicates that there is the need to find a better holistic solution to handle cognitive breakdowns amongst the elderly population. In this, O'Sullivan et al (2016)

advocates for the adoption of the Six-Item Cognitive Impairment Test (6-CIT) for cognitive screening across primary and secondary care. Nevertheless, the author advocates further validations, particularly in primary care. This research underlines the need for quick and reliable cognitive screening tests in the emergency setting. Xu et al (2020) further notes the need for integrating the nurse-led risk factor modification (RFM) and Health Advice (HA) in making sure a holistic and effective screening and intervention is realized for the mental issues amongst the elderly population.

Calf et al (2021) investigates the many different cognitive screening instruments. The Ottawa 3 Day Year (O3DY) and the 4 A's Test (4AT) can be seen as a great aid in the process of ruling out cognitive decline. The work acknowledges the diversities inherent in using one diagnostic test and thus recommends the two modalities in ED settings. As such, there is the need of having inclusive cognitive screening into the annual wellness visit. Wiese & Williams (2015) underlines the crucial position of community health nurses and the need to raise public consciousness about existing benefits.

According to the author, the nursing practitioners should purpose to diversify the screening approaches by making sure they make use of more than one screening tool. By doing so, it will be possible to validate each cognitive issue case. This is also reflected by Hasemann et al (2018) who state that using observation approaches such as the Delirium Observation Screening Scale (DOSS) is not enough in detecting mental issues amongst elderly population. Instead, this should be combined with the formal attention tests.

Miao et al (2024) further advocates for the building of a nurse-initiated screening system for mild cognitive impairment (MCI) in old adults living with diabetes. This screening approach should have demographic, lifestyle and neuropsychological processes, aligned with the global community's efforts to detect and fight cognitive impairment in the early stages. This is supported by the work of Tsai et al, (2016) who advocates for the sensitivity and specificity of the Montreal Cognitive Assessment (MoCA) and the Mini-Mental State Examination (MMSE) to identify Mild cognitive impairment (MCI) and dementia screening. The results confer the MoCA facility for MCI screening and MMSE efficiency for dementia in the general population (Abd et al, 2019). The significance of the nurse practitioners in the application and testing of these evaluations is particularly crucial to deliver correct assessments (Gibson et al, 2018). In this, Donald et al (2015) states that having experienced staff nurses is connected to improved outcomes on diverse health measures and behaviors among the older adults. This underlines the capacities of advanced practice nurses to support the quality of care for older adults' facilities through effective and tailored interventions. According to the author, effective and efficient screening requires decent experience and hence it is necessary to make sure the nurse practitioners have adequate exposure to various intervention methods.

Smid et al (2022) provides guideline that contributes valuable suggestions on evaluating and diagnosing cognitive decline in the elderly population. According to the authors, SCD and MCI stages that are followed by dementia, revealing the necessary cognitive tests and the work-ups ought to be kept into consideration by nursing practitioners working with older adults with cognitive issues. In this, Ferretti-Rebustini et al (2022) underline the fact that geriatric assessment is continuous and comprehensive in the advanced nursing practice. As such, nurses doing the screening must be Patient-centered to make sure they effectively provide comprehensive care for older adults, which includes cognitive assessments. Therefore, nurse practitioners are so important in the process of cognitive impairment detection through screening practices. Whether it is about setting up the screening systems, using specific

evaluation tools or manipulating the advanced practice roles, nurse practitioners are the backbone of the care of cognitive health issues of older adults. In accordance with Wittich et al (2019), who speak about the sensory screening tools in long-term care homes, nurses are part of a consensus process, which basically is a mechanism for selecting the screening tools. The importance of screening tests that include hand movement and counting fingers testing, and hearing screening like Hearing Handicap Inventory for the Elderly and Whisper Test are emphasized in the study. These tools are the most necessary for assessing the sensory impairments in the elderly people in long-term care settings being highly valuable for the nurse practitioners who participate in cognitive screening practices. MacDermott et al, (2022) look into the mental health screening barriers encountered by nursing practitioners in rural and remote areas. The research stresses on the main enablers being legislation, staff buy-in, and training and inter- organizational communications. In this respect, nurse practitioners play a crucial role in collaborative processes at implementing the strategies described above and surmounting contextual challenges, especially in rural areas.

In the study by Yang et al (2015), the authors advocate for innovative nurse-led cognitive screening model for outpatients with subjective memory complaint. Planning for cognitive screening as part of annual health examinations appears to be realistic after all within primary care. Although the research demonstrates the need for additional support services in a primary care for ones with cognitive impairments, it brings into focus the changing role of nurse practitioners in delivering comprehensive care to patients. These changing roles are also reflected by Chen et al (2023) who notes that nurse practitioners take an active part in the prevention and control of referral pathways for screening activities as well as allocation of resources. In the same note Stigter-Outshoven et al (2023), postulates that nurses responsible for mental health screening especially in emergency departments ought to have not just the basic nursing education but advanced knowledge such as risk assessment, triage tools, care pathways, and many others.

CONCLUSION

Collectively, the reviewed articles highlight the indispensable role of nurse practitioners in screening practices for cognitive impairment. From constructing screening systems to utilizing specific assessment tools and leveraging advanced practice roles, nurse practitioners emerge as pivotal contributors to addressing cognitive health challenges in older adults. The emphasis on collaborative implementation processes, addressing contextual challenges, and the

incorporation of innovative approaches underscores the evolving and critical role of nurse practitioners in holistic patient care.

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