

# Neuropsychological Assessment and Diagnosis of Mild Cognitive Impairment (MCI) in Latin America: A Challenge for the Future



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## Abstract

Mild Cognitive Impairment (MCI) is a neurocognitive disorder, which mainly affects the older adult population, characterized by presenting significant alterations at the level of cognitive processes and basic functional capacities. Its evaluation and diagnosis will depend on the use of suitable instruments, based on the selection of screens, tests and / or batteries that will facilitate its detection. In this respect, in Latin America instrumental progress has been slow, unlike other latitudes, which has significantly hindered the process of instrumentation and adaptation of useful tools for clinical work, which has considerably limited the work of specialists, Thus generating an uncertain context, and with highly questionable methodological gaps.

**Keywords:** Mild cognitive decline; Dementia; Evaluation; Diagnosis; Latin America

## Introduction

Mild cognitive impairment (MCI) is a clinical picture characterized by presenting slight, although significant, deficiencies at the level of cognitive processes - memory and non-memory - and in basic functional capacities - activities of daily life - without affecting the personality of the subject, whose incidence occurs mainly in the elderly population - and even above the age of fifty. It constitutes one of the first neurobehavioral clues to suspect the presence and/or future incidence of some dementia syndrome -Alzheimer, frontotemporal. Despite being considered as an independent clinical entity, references to it can now be found within the so-called neurocognitive disorders in the latest edition of the Diagnostic Manual of Mental Disorders [1]. In general, the protocol procedure to arrive at the diagnosis of this clinical entity consists, from the outset, in the administration of - general, specific- screenings, intended to define the severity of the condition and its specificity. In a complementary and confirmatory way, it is advisable to administer a battery intended to quantify and define the damage, in addition to defining its aetiology and the different risk factors that may be present at any given time.

In different countries of the first world, neuropsychological instruments - screenings, batteries - have become increasingly efficient and specialized in their detection and diagnosis. Due to the complexity of the clinical study of this disorder, controls have

been increasingly demanding, defining, as a result, more and more reliable cut-off points and statistical criteria, which have facilitated the instrumentation and implementation of neuropsychological tools, whose effectiveness is the product of both clinical and psychometric evidence so far found. However, this situation is far from Spanish-American reality. In this regard, the instrumental process in these countries has gone through - and continues to do so - a slow evolution, despite having been given greater attention to this problem, due to its high and alarming incidence, currently evidenced in clinical practice. Despite the limitations found, some efforts have been made to adapt short screenings and questionnaires, in order to meet the high demand and reduce the gaps found when carrying out the evaluation and diagnosis of MCI in these realities. However, these evidences are questionable, due to the absent reliability and/or antecedents that provide greater support to the results obtained, added to the presence of other intervening and/or moderating variables, present in the complex Spanish-American scenario.

## Mild Cognitive Impairment (MCI): Assessment and diagnosis

As previously mentioned, MCI is a neurocognitive disorder characterized by presenting slight, albeit significant, difficulties at the level of cognitive processes and functional abilities necessary

to perform activities of daily living independently and without support. Frequently, it tends to manifest in the older adult population, and unlike dementia - a clinical entity with which it has a close syndromic relationship - in this clinical picture, the presence of significant alterations in the subject's personality that define its disorganization is ruled out. or another major neuropsychiatric disorder. In general, the evaluation of MCI is fundamentally clinical, basically focused on the detection of those symptoms that define the clinical profile of the subject, information gathered from observation, interview and clinical-psychological examination.

After the initial clinical-psychological examination of the patient who comes to the consultation, with the suspicion of the presence of one or more of the symptoms described above, the protocol evaluation process begins, which goes through two stages: the initial symptomatic discard, from the administration of screenings, such as the Mini-Mental State Examination (MMSE), the Mini-Cognitive Exam (MEC) and the Schulman Clock Test, frequently used for their brevity and specificity, despite recent criticism. In addition, other questionnaires such as the Addenbrooke's Cognitive Examination (ACE), the Cambridge Cognitive Examination (CAMCOG), the Barthel Index (BI) and the Yesavage Geriatric Depression Scale (GDS) can be used in a complementary way at this stage, with the purpose of giving greater support to the results initially obtained at this stage of the evaluation process [1-3]. Finally, a second stage, where after having obtained a pre-diagnosis of the case, a series of specific instruments will be administered, such as intelligence tests and/or comprehensive neuropsychological batteries, which will determine the specificity and magnitude of the problem to be studied. For this, it is necessary to use tools that are in charge of evaluating one or more affected cognitive processes -this will depend on the type of MCI identified-, and other aspects related to activities of daily living and social adaptation.

### Situation of the evaluation and diagnosis of MCI in Latin America

Following the patterns and guidelines established by the main academic entities in the field of mental health in this part of the world -World Health Organization, American Psychiatric Association-, which serve as a reference for experts to carry out and develop -as far as possible- research projects, a series of short screenings and questionnaires have been adapted, although with limited impact and restricted use, only being applicable within certain contexts and realities [4,5]. This methodological deficiency has been tried to cover and minimize from the implementation of tools and other clinical procedures, based on the precepts found in the manuals developed by the aforementioned entities. However, and due to the growing need to formalize this procedure based on the use of a stable protocol, instruments from Spain have often been administered, these results be generalized to the different realities of the subcontinent, thus generating completely

relative and harshly questionable, due to its lack of sensitivity and reliability. Despite sharing a common language and history, the presence of other intervening and moderating variables defines the particularity of each Spanish-speaking context, as well as the dynamics of its agents involved, so it is advisable to previously consider these events, before administering a foreign instrument. In this regard, one of the instruments that have been used most frequently and traditionally in Latin America - as has also happened in other contexts, not necessarily Spanish-speaking - has been the Mini-Mental State Examination (MMSE) and its Spanish version Mini-Exam Cognitive (MEC), being moderately validated within some realities, facilitating, although partially, the diagnostic process of MCI. In addition, other questionnaires such as the Addenbrooke's Cognitive Examination (ACE), the Barthel Index (BI) and the Yesavage Geriatric Depression Scale (GDS) have been progressively implemented, although for the moment with limited results, due to the lack of studies and practical evidence that has significantly restricted - and continues to do so - the work of experts in relation to this area of mental health [1-3].

### Conclusion

MCI is a neurocognitive disorder, the successful diagnosis of which will depend on the suitable use of instruments that, according to their specificity, will allow the detection of the main cognitive and functional problems associated with this condition. In Latin America, instrumental research around MCI has progressed slowly, despite being one of the most frequent and attended clinical pictures in the elderly population. This slow progress is the result of the lack of reliable and adaptable instruments to each of the realities of the subcontinent, even being questionable, due to the existing methodological difficulties. That is why the instrumental studies, in this regard, present two fundamental limitations: The poor adaptation of the same to the different realities of the Spanish-American scenario, and the lack of updating of the materials that greatly hinders the investigation and the clinical approach of the problems that you want to study, a question that must be addressed as soon as possible, in order to facilitate the diagnostic process and the creation of stable protocols that facilitate the work of specialists in this part of the world.

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