PROPOSAL OF ADAPTATION OF THE COGNITIVE MINI-EXAM FOR PERSONS WITH PROBLEMS IN THE SPEECH

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– EXTENDED SUMMARY –

Since the second half of the 20th century, the increase in the population of 65 years and older has been observed, as a result of the improvement of the living conditions of developed societies. In fact, the National Institute of Statistics (INE) indicates that these people represent 18'8% of the current population in Spain. Despite being the greatest achievement of society, the aging of the population entailed diverse needs, including health, which must be addressed from a political, economic and social point of view (Abellán, Ayala, Pérez y Pujol, 2018).

Aging is a biological process in which there are a series of changes at the physiological, psychological and social level. When these modifications imply a worsening in the general functioning of the person, we speak of a pathological aging. Old age and disease are not implicitly linked, but old age does translate into greater vulnerability to the disease.

One of the illnesses to which these people become more vulnerable is to cerebrovascular accident (CVA). They are not more susceptible by age itself, but by factors that are associated with it, such as arterial hypertension (AHT, prevalence of 50% among people over 65 years old) (López Pérez-Díaz y Jiménez-Jáimez, 2011), and mellitus diabetes (MD, considered the third cause of death in people between 65 and 74 years old) (Aguilar-Navarro y Ávila-Funes, 2010). 88% of those affected by CVA are over 65 years old, of which 45% suffer aftermath. These factors, together with others (smoking, alcoholism, obesity ...), make the probability of suffering a CVA multiply every decade from 55 years old (Lorenzo, 2013).

Among the pathologies derived from the CVA, we find that aphasia and dysarthria are more common, with a prevalence of 77% (González y Armenteros, 2006). Aphasia is defined as the loss of some communicative resources, and in this proposal I focus on those whose deficiencies are in the production of speech (Broca, global and transcortical motor), and in dysarthria, which is a motor speech disorder (Juncos-Rabadán, Pereiro y Facal, 2006). Since both are a consequence of CVA, the risk factors to suffer them are the risk factors for CVA, and as we have seen there is a high vulnerability among older people.

Speech is a characteristic of the human being and very important for our species, since it is the instrument that allows the communication of the individual with its environment, with a high level of complexity and great effectiveness. Therefore, its loss or the fact that it is difficult, leads to multiple problems (Lorenzo, 2013). In addition to the obvious loss of expression, it also has negative affective consequences, such as frustration, sadness, and what is known as post-stroke depression

(incidence of 38.7% in people with aphasia) (Camoes-Barbosa, Sequeira-Medeiros, Duarte, Morais, Mendes y Meneses, 2012).

All these problems are obstacles in the clinical evaluation to these people, since the tests do not cover all the needs that may occur today in the elderly population, as a consequence of the increase in the average age of mortality.

An instrument that is a good example of this is the Mini-Examen Cognoscitivo (MEC) by Lobo (1979, 1999, 2002), the Spanish adaptation of the Mini-Mental State Examination (MMSE) by Folstein (1975, 1998, 2001). It is a brief test that measures, through 13 items, the main cognitive abilities.

Despite being the instrument for screening for cognitive deterioration most used in geriatric institutions, there are authors who already talk about their limitations, such as those pointed out by Carnero-Pardo (2014): the inability to apply to illiterates, being very influenced by the educational factors and not be of free use.

However, despite not being mentioned by authors, another limitation that I observed during my stay in a residential center for the elderly, is the difficulty of assessing people with problems in the production of speech, that is, they cannot express themselves, since most of the items are answered orally and even some of them require the repetition of words or numbers, pretending their learning. This means that several functions cannot be assessed and must score 0 on these items, causing the person to obtain a lower score, without having really assessed these capabilities.

This fact, together with the fact that the pathologies that affect the production of speech, such as some aphasias and dysarthria, are very common among the elderly population, has led me to propose an adaptation of those items of the MEC that require oral response, for that their response can be given in another way and the scores obtained correspond to the true cognitive level of the person, and not to a lower one due to their low ability to perform the test.

The adaptation methodology has been based mainly on getting these items answered in a more visual way and by recognition. For the design I have used groups of words among which the correct answer is found and pictograms, so that, for example, in those items that require learning of words or numbers, learning is more visual, without the need for oral repetition.

At all times, the main purpose has been for the adapted items to evaluate the same function as in the ordinary MEC, without providing the answers. To do this, I have introduced interferences, such as putting a large number of words or numbers, to decrease the probability of success by chance; or put pictograms that may cause doubt (for example, a button or a camel, which are similar to a peseta and a horse).

For the implementation of the proposal I choose a woman resident in a public geriatric center in Castellón, who suffers from Broca's aphasia and right hemiplegia as a consequence of an ictus that she suffered 5 years ago. First, I administer the ordinary test, of which I score 0 on items 3, 4, 5, 6 and 8 for aphasia, and 12 and 13 for hemiplegia. He gets a score of 10/35, which is considered severe cognitive deterioration. He shows constant blocks and signs of frustration when he feels unable to do what the test demands. After two hours, I administer the adapted test, explaining previously that the questions are the same as in the previous test, but adjusted to her needs, and she only needs to point the finger at the answer that she thinks is correct. I only score 0 on items 12 and 13 for hemiplegia, and get a score of 18/35, considered moderate cognitive deterioration. She shows more predisposed and concentrated and completes the test in less time.

In the results a change of cognitive level range is observed, from severe to moderate, and also within the second score the majority of cognitive functions evaluated by the test are valued; therefore the score is more real. As proposals of improvement of the adaptation I would highlight the size of the recognition elements (words, numbers, drawings), since most of the elderly have a reduced vision due to age and I have verified that it is an impediment; and on the other hand the excessive number of elements of interference in some items, which translates into greater difficulty.

In conclusion, the adaptation has turned out to be an effective tool both at the evaluation level: higher score having passed little time between one test and another; as on the affective level: increase in motivation and involvement. The fact that it has been effective in people with this pathology reflects the need and importance of validating this type of test, which assess aspects as relevant in the elderly as is the level of cognitive impairment, with methodologies more adapted to the possible deficiencies that may suffer.

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