

137 - PRELIMINARY DATA OF THE SCREENING OF NEUROPSYCHOLOGICAL ALTERATIONS IN MOTRICITY AREA

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INTRODUCTION

There has been growing attention given to the elderly. For the World Health Organization - WHO (WHO, 1997), the aging brings neuropsychological changes, especially as cognitive deficits, changes in memory, speed of thinking, sleep, expressions of episodes of confusion and psychological disorders and activities of daily living (SCHLINDWEIN-ZANINI, 2009).

The health problems of older people are serious. Refer to losses, especially vision, hearing and dementia, these, in turn, can seriously compromise the autonomy of individuals (WHO, 1997). It should be noted that the aging process triggers changes in both the individual (in their psychological, social, physical and neuropsychological) and in the environment that surrounds (SCHLINDWEIN-ZANINI, 2009). Entering the age considered elderly, brings many changes in humans. In the case of the brain, morphological changes occur (CANÇADO, 1994). Note a decrease in the number of neurons and synapses, and the existence of psychological and physical symptoms such as memory lapses, slower thinking, a passing episode of confusion, tremor, difficulty to walk, insomnia at night with daytime sleepiness and lack of balance (LENT, 2001).

According Schindwein-Zanini (2009) neuropsychological assessment is the examination of the cognitive functions of the individual, orientation, memory, language, attention, reasoning, through procedures and standardized tests. It can be used to identify cognitive decline in older adults, assessment of damage to brain areas in neurological disorders (head trauma, epilepsy, stroke), differentiation syndrome psychological and neurological disorders such as depression and dementia (in addition to considering previous studies, such as computed tomography, magnetic resonance imaging, EEG and neurological consultations, psychological and psychiatric).

This evaluation should preferably use validated instruments that include the patient and the influences of their environment. Given the results of neuropsychological assessment, it is possible to consider a rehabilitation intervention (SCHLINDWEIN-ZANINI, 2009). Given this background, data related to neuropsychological framework of the patient are important to professionals involved in the care of elderly people such as doctors, psychologists, physiotherapists, physical educators, among other professionals.

OBJECTIVES

Investigate symptoms related to alterations in manual dexterity, spatial and temporal in healthy elderly. Obtain preliminary data concerning the neuropsychological, especially manual dexterity, spatial and temporal, through the inventory neuropsychological - SZC in healthy elderly.

METHODOLOGY

For research purposes, the Inventory of neuropsychological Adult – SZC was used, the inventory was developed by Schindwein-Zanini and Cruz, in 2009. This tool intends to help the professional to conduct a quick screening of neuropsychological disturbances.

The SZC was fully implemented in 10 individuals aged between 60 and 70 years, who agreed to participate. They are from the state of Santa Catarina - Brazil, and did not receive a diagnosis of psychological disorders, neurological and / or neuropsychological previously. The issues of SZC related to spatial orientation, temporal orientation and manual dexterity / motor skills were selected for more detailed studies in this article.

The analysis was based on the classification presented on Board 1, developed especially for the publication of this research.

Board 1 - Classification of changes based on symptoms.

INDEX OF SYMPTOMS (SZC) - Average -	CLASSIFICATION OF ALTERATIONS
0,00 – 0,75	MINIMUM
0,76 – 1,50	LIGHT
1,51 – 2,25	MODERATE
2,26 – 3,00	SERIOUS

STATISTIC TREATMENT

After the conversion the score obtained by subjects in the SZC, held the statistical treatment of data. We used the software SPSS (APACHE, 2004), version 13.0. Exploratory analysis of data was performed using descriptive statistics, with the mean and standard deviation. For illustrative purposes we used to refer to the percentage of the total sample cited.

RESULTS AND DISCUSSION

- ▶ **Gender:** from the 10 participants, 2 were males and 8 females.
- ▶ **Age:** people aged 60 to 70 years of age participated in this survey, and the average age was 64 years and 7 months (SD=4.2).
- ▶ **Space Orientation:** related to this variable, 100% of the sample presented "minimal" change rates, a very positive result, since "spatial tasks usually involve how the human being is directly or indirectly in relation to geometry space and its position in relation to it" (RIES et al, 1990). The notion of space has two steps: one linked to the immediate perception of the environment (sensory-motor area) and one based on mental operations (area representative). This trend applies to acquisition of spatial dimensions: right/left, far/near, big and small, deep/shallow, allowing to the person a determination and structuring of the

space in which they live (ROSANETO, 2002).

► **Temporal Orientation:** in relation to this variable, 90% of the sample presented "minimum" change rates and 10% presented "slight" index changes. The temporal orientation refers to the ability to be located based on the sequence of events (before, during, after), the length of intervals (time, pace and rhythm), from the renewal of certain cyclical periods (weekdays, months, season), and the irreversibility of time (ROSANETO, 2002). This author explains that "The time is, above all, memory: as I read, the time passes. Thus, there are the two major components of the temporal organization: the order and duration as the rhythm together. The first defines the succession between the events taking place (...); the second allows the variation of the interval separating two points, e.g. the beginning and end of an event" (ROSANETO, 2002, p. 22).

► **Manual Aptitude:** related to this variable, 40% of the sample presented "minimum" rates, 40% presented "light" and 20% presented "moderate" changes. It should be noted that the sample mean in this regard was classified as "light", suggesting deficits in fine motor skills of the participants. Fine motricity refers to the ability to control a set of activities involving the movement of certain parts of the body, through the use of minimum force to achieve a precise answer to the task (GALLAHUE AND OZMUN, 2001). For Rosa Neto (2002), coordinating activities manual represents the most frequent and common in humans. It includes the transport stage hand, stage grasp and manipulation, resulting in a set with three components: object/eye/hand. For the coordination of these acts, it is required the participation of different motor centers and sensory nerve as reflected in the organization of complex motor programs and gradually developed (SHEPHERD, 1996). The prefrontal cortex corresponding to the central fine motor skills plays a key role in controlling the movements simple or complex. The importance of cortical areas and sensory-motor emphasizes the extreme fineness of tactile controls and motors, allowing the recognition of shapes even without the participation of vision (ROSANETO, 2002).

► **Neurological disorders:** it was asked by the SZC if the participant had the diagnosis of a disorder of the neuropsychological, neurological, emotional sphere or expected to be cited. Only 2 subjects mentioned, respectively, depression and facial paralysis.

► **Relationship:** through the instrument, it was asked whether the participant had direct relatives (parents, brothers, uncles and cousins) with epilepsy and/or Alzheimer disease and depression, and/or stroke, and/or other neuropsychological/neurological disorders, and 60% reported having kinship with these changes.

► **Assessment of SZC questionnaire:** the last component of SZC questions if anything was unclear or inadequate, investigating whether the participant understood clearly and accurately the points recorded by the instrument. The unanimous answer was positive, indicating that the data collected are compatible with the reality of the sample.

In this study, it was given great emphasis to the areas of the instrument more directly related to motricity, such as manual aptitude, spatial and temporal orientation.

For information purposes, it refers to the average and standard deviations obtained in other items of the instrument in table 1.

Table 1 - Average values obtained in other areas of SZC.

OTHER AREAS OF SZC	AVERAGE	STANDARD-DEVIATION
Concentration	1,52	0,9
Irritability	2,20	1,1
Warning	0,90	0,7
Decision-making	0,60	0,8
Short-term memory	1,30	0,9
Sleep	1,22	1,1
Long-term memory	0,70	1,0
Oscilation of humor	1,00	1,0
Independence and autonomy	0,10	0,3
Listening comprehension	1,00	0,7
Verbal expression (oral)	0,92	0,6
Writing expression	0,80	0,6
Visual memory	1,00	0,8

It worths to note that the symptoms of concentration and irritability, both classified as neuropsychological "moderate" changes at Board 1.

CONCLUSIONS

In face to the implementation of the Inventory of neuropsychological SZC in 10 elderly aged 60 to 70 years, concluded that:

-Most of the sample individuals showed no signs of changes related to the spatial and temporal orientation, but most showed signs of changes in manual aptitude, 40% being "soft" and 20% "moderate", suggesting the need for motor interventions and neuropsychological specifics.

-The inventory of neuropsychological alterations SZC showed to be a good screening instrument for neuropsychological disturbances, including the elderly.

-The inventory of neuropsychological alterations SZC proved to be a good tool to screen for symptoms related to impaired manual aptitude, spatial and temporal orientation, which can relate to neuropsychological disorders such as Alzheimer and Parkinson diseases, for example.

-The individuals of the sample showed a good understanding of the instrument, indicating that the same can be applied in different samples.

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PRELIMINARY DATA OF THE SCREENING OF NEUROPSYCHOLOGICAL ALTERATIONS IN MOTRICITY AREA ABSTRACT

INTRODUCTION: An increasing attention from health professionals for the elderly. Given the importance of neuropsychological and their relationship to psychomotor factors in senescence, we performed a study on the subject.

OBJECTIVES: To investigate symptoms related to changes in manual aptitude, spatial and temporal orientation in healthy elderly and to obtain preliminary data concerning the neuropsychological through Neuropsychological Alterations Inventory - SZC (2009). **METHODS:** For research purposes, we used the Inventory of Neuropsychological Alterations for Adults - SZC (developed by Schlindwein-Zanini and Cruz, 2009) in 10 individuals aged between 60 and 70 years from the state of Santa Catarina - Brazil that did not received a diagnosis of psychological disorders, neurological and/or neuropsychological previously, who agreed to participate. In the discussion and description of the results it was selected for more details in this article, the issues of SZC related to spatial orientation, temporal orientation and manual aptitude. **RESULTS AND CONCLUSIONS:** The majority of the sample individuals showed no signs of changes related to spatial orientation and temporal orientation, but most showed signs of changes in manual aptitude, 40% being "soft" and 20% "moderate", suggesting the need for specific motor and neuropsychological interventions; Inventory neuropsychological alterations SZC was a good screening instrument for neuropsychological disturbances, including the elderly, the SZC proved to be a good tool to screen for symptoms related to disorders of manual aptitude, temporal orientation and space orientation, which can relate to neuropsychological disorders such as Alzheimer and Parkinson diseases, for example, the individuals of the sample showed a good understanding of the instrument, indicating that it can be applied in different samples.

KEYWORDS: neuropsychological alterations, motor alterations, the elderly.

PRÉLIMINAIRES DONNEES DES DÉPISTAGE DANS L'ALTERATIONS NEUROPSYCOLOGIQUES EN MOTRICITÉ

RÉSUMÉ

INTRODUCTION: Une attention croissante de professionnels de santé pour les personnes âgées. Vu l'importance des troubles neuropsychologiques et leur relation avec les facteurs psychomoteurs dans la sénescence, nous avons réalisé une étude sur le sujet. **OBJECTIFS:** Pour étudier les symptômes liés à l'évolution de la dextérité manuelle, l'orientation spatiale et temporelle chez les personnes âgées en bonne santé et d'obtenir des données préliminaires et obtenir des données préliminaires concernant les altérations neuropsychologiques, de l'inventaire des altérations neuropsychologiques - SZC (2009). **MÉTHODES:** Pour les fins de recherche, nous avons utilisé l'Inventaire des altérations neuropsychologiques des adultes - SZC (développé par Schlindwein-Zanini et Cruz, 2009) dans 10 sujets âgés entre 60 et 70 ans, de l'État de Santa Catarina - Brésil, qui a reçu un diagnostic de troubles psychologiques, neurologiques et / ou neuropsychologique précédemment, qui ont accepté de participer. Dans la discussion et la description des résultats a été sélectionné pour plus détaillée dans cet article, les questions de SZC liées à l'orientation spatiale, l'orientation temporelle et de la dextérité manuelle. **RÉSULTATS ET CONCLUSIONS:** La majorité de l'échantillon n'a montré aucun signe des altérations liés à l'orientation spatiale et de l'orientation temporelle, mais la plupart ont montré des signes de l'évolution de la dextérité manuelle, 40% étant "soft" et 20% "modérée", suggérant la nécessité d'interventions spécifiques à moteur et neuropsychologique; l'Inventaire des altérations neuropsychologiques a été un bon instrument de dépistage pour les altérations neuropsychologiques, y compris les personnes âgées; le dit inventaire SZC s'est avéré être un bon outil pour dépister les symptômes liés à des troubles de l'habileté manuelle, orientation dans le temps et l'orientation spatiale, ce qui peut concerner l'ordre troubles neuropsychologiques comme l'Alzheimer et de Parkinson, par exemple; les sujets de l'échantillon a montré une bonne compréhension de l'instrument, en indiquant que la même chose peut être appliquée dans différents échantillons.

MOTS-CLÉS: altérations neuropsychologie, altérations moteurs, les personnes âgées.

DATOS PRELIMINARES DE DETECCIÓN DE ENMIENDAS NEUROPSICOLÓGICAS EN MOTRICIDAD

RESUMEN

INTRODUCCIÓN: La atención es cada vez mayor de profesionales de la salud para los ancianos. Dada la importancia de los aspectos de la neuropsicología y su relación con factores psicomotores en la senectud, hubo un el estudio sobre el tema. **OBJETIVOS:** Para investigar los síntomas relacionados con las enmiendas en la destreza manual, espaciales y temporales en ancianos sanos, fueran colectados datos preliminares sobre las enmiendas neuropsicologías a través de los cambios en el inventario de neuropsicología - SZC (2009). **MÉTODOS:** A los efectos la investigación, hemos utilizado las enmiendas en el inventario de neuropsicología de adultos - SZC (desarrollado por Schlindwein-Zanini y Cruz, 2009) en 10 sujetos entre 60 y 70 años, desde el estado de Santa Catarina - Brasil, que no recibieran el diagnóstico de los trastornos psicológicos, neurológicos o en neuropsicología previamente, y que accedió a participar del estudio. En el debate y la descripción de los resultados, fueron seleccionados para más detallada este artículo, las cuestiones relativas a orientación espacial, orientación temporal y destreza manual. **RESULTADOS Y CONCLUSIONES:** La mayoría de los sujetos la muestra no mostraran signos de enmiendas relacionadas con la orientación espacial y de orientación temporal, sin embargo, la mayoría mostraba signos de enmiendas en la destreza manual, con un 40% "suave" y un 20% "moderado", lo que sugiere la necesidad de intervenciones psicomotoras y en neuropsicología específicas; El inventario SZC fue un buen instrumento de detección de enmiendas en neuropsicología, incluidos los ancianos; El inventario SZC demostró ser una buena herramienta para la detección de síntomas relacionados con los trastornos de destreza manual, que podrán referirse a los trastornos en neuropsicología, como la enfermedad de Alzheimer y el Parkinson, por ejemplo; Los sujetos de muestra mostraran buena comprensión del instrumento, señalizando que se puede aplicar en diferentes muestras.

PALABRAS CLAVE: neuropsicología, trastornos motores, ancianos.

DADOS PRELIMINARES DO RASTREIO DE ALTERAÇÕES NEUROPSICOLÓGICAS NA ÁREA DA MOTRICIDADE**RESUMO**

INTRODUÇÃO: É crescente a atenção dos profissionais de saúde destinada ao idoso. Tendo em vista a importância dos aspectos neuropsicológicos e sua relação com fatores psicomotores na senescência, realizou-se um estudo sobre o tema. **OBJETIVOS:** Investigar sintomas relacionados a alterações de destreza manual, orientação espacial e temporal em idosos saudáveis e obter dados preliminares referentes a alterações neuropsicológicas, através do Inventário de alterações neuropsicológicas – SZC (2009). **METODOLOGIA:** Para fins de pesquisa, utilizou-se o Inventário de Alterações Neuropsicológicas para Adultos – SZC (desenvolvido por Schlindwein-Zanini e Cruz, 2009) em 10 indivíduos com idades entre 60 e 70 anos, procedentes do estado de Santa Catarina - Brasil, que não receberam diagnóstico de transtornos psicológicos, neurológicos e/ou neuropsicológicos anteriormente, que concordaram em participar desta pesquisa. Na discussão e descrição dos resultados, selecionou-se, para maior detalhamento neste artigo, as questões do SZC referentes a Orientação espacial, Orientação temporal e Destreza manual. **RESULTADOS E CONCLUSÕES:** A maioria dos sujeitos da amostra não apresentou sinais de alterações relacionadas à Orientação espacial e Orientação temporal, porém, a maioria apresentou sinais de alterações na Destreza manual, sendo 40% “leve” e 20% “moderado”, sugerindo a necessidade de intervenções motoras e neuropsicológicas específicas; o Inventário de alterações neuropsicológicas SZC mostrou ser um bom instrumento de rastreio para alterações neuropsicológicas, inclusive em indivíduos idosos; o citado inventário SZC revelou ser uma boa ferramenta para o rastreio de sintomatologia relacionada a distúrbios de Destreza manual, Orientação temporal e Orientação espacial, que pode se relacionar a transtornos de ordem neuropsicológica, como Doença de Alzheimer e Parkinson, por exemplo; os sujeitos da amostra apresentaram boa compreensão do instrumento, sinalizando que o mesmo pode ser aplicado em diferentes amostras.

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