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COGNITIVE DECLINE AND PSYCHOTROPIC DRUG USE IN ELDERLY PEOPLE WITH MENTAL DISORDERS: A NARRATIVE REVIEW

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ABSTRACT

The growth in the number of older persons in the population is considered a worldwide phenomenon, with direct consequences in health systems. The pertinent literature points out an increase in the diagnosis of mental disorders and the prescription of psychotropic drugs for that population, as well as frequent complaints regarding cognition. The paper aims to discuss cognitive decline and its relationship with psychotropic drug use in aged people with mental disorders. The data collection method was based on the review of books and papers published between 2000 and 2018. Although, on the one hand, the studies show that psychotropic drugs are an effective strategy in the treatment of mental disorders, on the other hand, they indicate that a high intake maybe unfavorable, due to the predisposition or the worsening of cognitive decline, thus reflecting on aged people's quality of life.

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INTRODUCTION

Ageing is a common and natural process, with a continuous, progressive and irreversible character in any individual. There are consequent functional, biochemical and emotional changes, together with reduced ability to adapt to the environment (CANINEU; DINIZ, 2007). The authors highlight that the process results in greater fragility and susceptibility. It is not necessarily an illness, but it may trigger such condition, as it may cause, among other effects, falls, and affective, cognitive, and social changes. The World Health Organization (WHO) establishes age 65 as marking the start of later life in developed countries, and age 60 in developing countries (WORLD HEALTH ORGANIZATION, 1994). Other authors identify an age group called "very old" to refer to people aged 80 years and older. Other classifications also include the centenarians and supercentenarians: people who have lived or surpassed their 110th birthday (CAIXETA; VIEIRA, 2016). In Brazil, the phenomenon of the growth of the elderly population is strongly linked to important processes, such as a

significant decrease in fertility and birth rates, a progressive increase in life expectancy, technological advancement, the access to health services, and cultural changes (BRASIL, 2009). The Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística, IBGE), by reason of a higher life expectancy, announces that the number of Brazilians aged over 60 years will practically quadruple up to 2060, thus confirming the tendency of accelerated ageing of the population. Population projections based on the 2010 Census suggest that the population aged 60 years and older will change from 14.9 million (7.4% of the total) to about 70 million in 2060 (INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA, 2018). The ageing process is marked by profound biological and behavioral changes, which may or not be accompanied by diseases, limitations in the performance of daily activities, and permanent disabilities (TRAUMUNT *et al.*, 2010). According to the authors, that is the reason why the knowledge of elderly people's health problems, particularly the ones regarding their mental health, is relevant. The people in this age group have specific clinical, psychiatric and psychodynamic characteristics that deserve distinctive attention from the professionals who assist them. Given the growth of the elderly population, currently considered a global phenomenon, there are direct

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consequences in the health systems. The relevant literature indicates that, over the last few years, the increase in the diagnosis of mental disorders in that population has required the development of research on the use of psychotropic or psychopharmaceutical drugs, as well as on the relationship between the consumption of such drugs and cognitive decline in that age group (NOIA *et al.*, 2012). Therefore, the paper aims to discuss some aspects of cognitive decline and its relationship with psychotropic drug use in elderly people with mental disorders.

MATERIALS AND METHODS

The paper is a narrative literature review. It is part of ongoing research work on the topic, which involves the relationship between cognitive decline and psychotropic drug use in elderly people with mental disorders. Narrative reviews provide a comprehensive view of the current knowledge of a theme, in order to describe and discuss the development of a particular subject, from a theoretical or contextual perspective. They are based on the analysis of relevant texts published in books, as well as in printed and electronic journals, according to the author's personal interpretation and critical analysis, so as to enable the reader to get information or to update their knowledge of a specific theme, in a short time (ATALLAH; CASTRO, 1997). The theme was investigated in books on geriatric psychiatry, diagnostic manuals of mental disorders and journals published between January 2000 and July 2018, in the electronic databases VHL (Virtual Health Library), PubMed, and Scielo, totaling 19 papers. Two publications prior to the period are noteworthy, due to the relevance of the data presented and the citations in the papers consulted. The following standardized descriptors were used: "cognitive dysfunction", "psychotropic drugs", "aged people", and "mental disorders". The inclusion criteria were: research papers, case studies, and journal reviews on the prevalence of mental disorders in the elderly, psychotropic drug use in the elderly, and the relationship between the use of such medications and cognitive decline in elderly people with mental disorders. The papers were read *intotum*, in order to categorize them and then conduct their critical analysis.

DISCUSSION

Mental disorders in aged people

The American Psychiatric Association (APA) characterizes mental disorder as a syndrome in which significant changes in cognitive, emotional, or behavioral aspects are observed (AMERICAN PSYCHIATRIC ASSOCIATION, 2014). Disorders of the kind are generally associated with significant suffering or disability that affect professional and social activities. Although most mental disorders are apparently less frequent in senior citizens, some may suffer from dementia, depression, anxiety, schizophrenia, alcohol dependence, and personality disorders, among others (CAIXETA; VIEIRA, 2016). The authors define three natural developments concerning psychiatric practice for elderly people:

- Increased mental disorders directly related to the process of cerebral ageing (neurodegenerative diseases, involuntal psychosis, depression, organic brain syndromes);
- Increased psychiatric disorders indirectly related to the process of general ageing of the organic systems and,

therefore, the emergence of general clinical conditions or treatments that predispose to the onset of psychiatric symptoms or complications; and

- Increased survival of mentally ill patients with chronic diseases initiated before senility (schizophrenia, mood disorders, intellectual disability).

Psychiatric symptoms, called non-psychotic, are part of the group known as common mental disorders, whose characteristics are irritability, fatigue, insomnia, difficulty concentrating, forgetfulness, anxiety, and somatic complaints (BORIM; BARROS; BOTEAGA, 2013). The individuals, according to the authors, experience acute situations of anxiety and depression, with symptoms considered less severe, associated with stressful events of life. Somatic complaints are much more frequent than psychological or emotional complaints. According to some studies conducted in developed countries, the prevalence of mental disorders among elderly people corresponds to about 20% in people aged 65 and older without diagnosis of dementia. Most of the epidemiological studies observe the prevalence of depression in 5 to 10% of the patients – these figures may be similar in developing countries (SKOOG, 2011). The author also mentions that some research papers suggest that anxiety disorders may be as common as, or more common than, depression in elderly people, with prevalence between 6 to 12% in individuals aged 65 years and older, and 10.5% in people aged over 85 years. In population surveys on self-reported psychotic symptoms in elderly people without dementia, prevalence varies from 1.7% to 4.2%. In Brazil, some studies reveal the existence of prevalence in the 1980s: 33% of any mental disorder in people aged over 55 years. The so-called neurotic disorders were the most prevalent (23%), followed by organic disorders (5%) and alcoholism (3%) (ALMEIDA FILHO *et al.*, 1984, CAIXETA; VIEIRA, 2016). In a study conducted in the city of São Paulo (SP), the prevalence of mental disorders among people aged over 65 years was 33.6%, and 30% in an institutionalized condition (XAVIER *et al.*, 2014). Another study identified, for the set of common mental disorders, a prevalence of 29.7%, predominantly in women aged 70 years and older, with less than four years of formal education (BORIM; BARROS; BOTEAGA, 2013). The data unveil a challenge regarding mental health care for elderly people: frequency of care, coverage, involvement of the family and the society, and the professionals' vision in relation to the health-disease process in that population (MARIM; MAFTUM; LACERDA, 2018).

Cognitive decline and use of psychotropic drugs in aged people with mental disorders: The increasing number of elderly people both in Brazil and worldwide has altered the morbimortality profile, with a predominance of chronic-degenerative diseases. Cardiovascular, locomotor, and mental illnesses are the most prevalent and require the continuous use of medications (OLIVEIRA; NOVAES, 2013). The authors present studies that show that every old person takes between four and six medications on average, and that figure is higher as they grow older. The most commonly used medications are cardiovascular agents and psychotropic drugs, followed by anti-inflammatory drugs, analgesics and gastrointestinal agents. Cordioli (2005) emphasizes the changes in terms of conceptions, practices and perspectives that have taken place since the 1950s in the field of psychiatry and mental health, with the advent of the use of psychotropic or psychopharmaceutical drugs. These medications are defined as substances that act directly in the central nervous system,

affect mood, cognition, and behavior, and constitute an important therapeutic resource in the treatment of mental disorders (VOYER, 2004). The Anatomical Therapeutic Chemical (ATC) index, a system developed by the World Health Organization Collaborating Centre for Drug Statistics Methodology (WHOCC, 2017), adopts the following codes for the classification of nervous system drugs:

1. N05 (psycholeptics) – these include antipsychotics (N05A), anxiolytics (N05B), and hypnotics and sedatives (N05C);
2. N06 (psychoanaleptics) – these include antidepressants (N06A), psychostimulants, agents used for ADHD and nootropics (N06B), psycholeptics and psychoanaleptics in combination (N06C), and anti-dementia drugs (N06D);
3. Clonazepam – classified by the ATC as an anticonvulsant (N03A). It is also considered a psychopharmaceutical drug, as it is routinely prescribed as an anxiolytic in the treatment of sleep disorders related to anxiety.

The elderly group stands out as the one that uses psychopharmaceutical drugs the most, due to the presence of mental disorders such as comorbidities, and the use of such medications to relieve somatic conditions (MENG; D'ARCY; TEMPIER, 2013). In European old people, the prevalence of psychopharmaceutical drug use varied between 20.5 and 29.8%. These figures were higher than the ones observed among North-American old people, between 14.9 and 19.0% (CARRASCO-GARRIDO, 2007). In Brazil, in a survey of old people in the city of São Paulo, Noia *et al.* (2012) found the prevalence of consumption of 12.2%: 7.2% of antidepressants, 6.1% of benzodiazepines, and 1.8% of antipsychotics. A study by Abi-Ackel *et al.* (2017) detected, in the metropolitan region of Belo Horizonte (MG), the prevalence of psychotropic drug use of 13.4%: 8.3% of benzodiazepines and 5.0% of antidepressants, associated with elderly women and the medical diagnosis of depressive disorder. A study carried out on elderly people assisted at the Psychosocial Care Center (Centro de Atenção Psicossocial, CAPS) in the city of Marília (SP) demonstrated the consumption of 3.3 psychotropic drugs on average, mainly intended for the treatment of chronic psychotic disorders (MARIM; MAFTUM; LACERDA, 2018). According to the authors, elderly people with mental disorders experience situations that may lead to the use of psychotropic drugs, to control the signs and symptoms of those conditions. However, the possibility of suffering other alterations resulting from such drugs is real. The prevalence of psychopharmaceutical drug use in old people is seen with concern in the literature, due to the association with adverse events, resulting from the physiological alterations and the clinical comorbidities themselves. Examples of risks include falls, hypotension, sedation, and cognitive impairment.

According to Rabelo (2009), cognition comprises the functioning of an individual in terms of some capacities as thought, perception, reasoning, feeling, as well as their response to external stimuli. In older people, cognition encompasses the functions that constitute the basis for the establishment of self-determination and autonomy. Therefore, the preservation of the cognitive capacity may demonstrate their necessary conditions, in order to safeguard physical, psychological, and social integrity (CHAVES *et al.*, 2015). Gurian *et al.* (2012) emphasize that, during the ageing process,

15% of older people initially develop progressive cognitive disability. Out of that figure, 5% over 65 years old and 20% over 80 years old develop moderate to severe dementia. Some studies on the prevalence of cognitive decline in Brazilian elderly people registered estimates ranging between 7.1% and 73.1%, when the sociocultural and economic contexts were considered. (HERRERA; CAMELLI; NITRINI, 1998). In studies conducted in other countries, according to Chaves *et al.* (2015), the figures varied between 6.3% and 46%; the risk of development was associated with the person's intrinsic and extrinsic factors. Therefore, cognitive dysfunction is determined by a complex association of factors, which include individual and social conditions and that may directly interfere in aspects related to old people's quality of life. Epidemiological studies have exposed the relationship between the use of psychopharmaceuticals and the risk of cognitive decline in elderly people. A study by Wright *et al.* (2009) asserted that the use of such medications, mainly combined and in higher doses, seems to be associated with cognitive decline.

The research work conducted by Puustinen *et al.* (2011) on elderly people without previous cognitive alterations corroborates the findings of the previous one. They state that benzodiazepines and opioid analgesics in combination, as well as the isolated use of anticholinergic drugs (muscle relaxants, antispasmodic, and for Parkinsonism), are associated with cognitive decline. Cognitive decline is commonly found in aged people with mental disorders. Moreover, in many cases of such disorders, cognitive symptoms are not treated, and consequently have a great impact on their functional abilities. Cognitive symptoms are part of the diagnostic criteria of depressive disorder, according to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (AMERICAN PSYCHIATRIC ASSOCIATION, 2014). Not surprisingly, therefore, some studies report the presence of cognitive decline in elderly people with depression. In anxiety disorders in elderly people, including social phobia and generalized anxiety, cognitive performance worsens, and the psychotic syndrome (schizophrenia and schizoaffective disorder) may result in the worsening of verbal skills, the ability to solve problems, and the spatial ability (SKOOG, 2011). Cabrera *et al.* (2010) also underline the importance of psychotropic drug use as a risk and even a determinant for cognitive decline in the elderly. A survey of 131 elderly people aged 77 years on average, in a non-institutionalized condition, referred only to depressive disorder as a variable. The authors analyze the relevance, for clinical practice, of the use of antidepressants, anticonvulsants and antipsychotics. However, they stress that their prescription and management need to be carefully assessed in relation to their potential effects on the functional capacity of the elderly.

Final Considerations

The ageing process involves alterations in different areas of cognition. People aged 60 years and older complain about difficulties related to memory and other cognitive abilities, especially when comparing their current and past performances. Considering the presence of mental disorders and the consequent use of psychopharmaceutical drugs, it is imperative to pay greater attention to such complaints. The discussion on the theme reinforces that, although all authors agree that psychopharmaceuticals are an effective treatment strategy, their constant use in the elderly may be unfavorable,

due to the predisposition or worsening of cognitive decline, especially when in combined use, thus affecting elderly people's quality of life. The survey conducted in this paper did not find any studies on the relationship between cognitive decline and psychopharmaceutical drug use in a specific group of elderly people diagnosed with different mental disorders. In the papers, research variables were described regarding the reporting of anxiety and depression disorders, with no specifications about their severity or the duration of the treatment. References to other diagnostic classifications of mental disorders, such as bipolar affective disorder, schizophrenia, personality disorders, among others, were not found either.

It is therefore indispensable to deepen the studies on the relationship between cognitive decline and psychopharmaceutical drug use in elderly people with mental disorders. It is also important to investigate and identify cognitive changes during the routine assistance provided to people in that age group, by means of standardized public health instruments, such as the Mini-Mental State Examination. Such enhanced knowledge is fundamental, as it may give support to immediate interventions while taking care of the elderly. In addition, preventive measures may be stimulated by means of appropriate guidelines, thus promoting a healthier ageing process.

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