ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 08, Issue, 11, pp.24313-24317, November, 2018

ORIGINAL RESEARCH ARTICLE OPEN ACCESS

EVALUATING THE LEVEL OF PHYSICAL ACTIVITY AND COMMON MENTAL DISORDERS IN ELDERLY PEOPLE WHO USE CHRONIC MEDICINES

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ARTICLE INFO

Article History:
Received 20th August, 2018
Received in revised form
21st September, 2018
Accepted 23rd October, 2018
Published online 30th November, 2018

Key Words:
Elderly,
Use of Medications,
Physical activity,
Mental Disorders.

ABSTRACT

Aging causes physiological changes that can lead to the appearance of chronic degenerative diseases and consequently the chronic use of medications. This article aims to evaluate the level of physical activity and mental health of elderly people who use chronic medications. This is an epidemiological, quantitative and cross-sectional study. The sample consisted of 128 elderly people of both genders. To obtain the data, we chose the BECK anxiety and depression questionnaire, the ABUEL questionnaire for medication use and the IPAQ short version. As results it was verified that the majority of the elderly use drugs for pain and depression and the use of antidepressants had a positive and significant association with low level of physical activity and with anxiety, p≤0,014 and p0, 015. It was also found a strong association between the use of drugs for depression and heart in anxious people, p≤0,015 and ≤0.02. It is respectable that the likely effects of drug use among the elderly are well known. Specific attention should be paid to the elderly who use polypharmacy.

Citation: Ísis Silveira Dias, Edlucio Souza Ramos, Michele Mara Caires Gonçalves *et al.*, 2018. "Evaluating the level of physical activity and common mental disorders in elderly people who use chronic medicines", *International Journal of Development Research*, 8, (11), 24313-24317.

INTRODUCTION

The elderly comprises a group of individuals over 60 years of age, it is believed that by 2050, 21.50% of the entire world population will be elderly people and, therefore, will have a significant increase in the burden of non-chronic diseases (Moreno *et al.,* 2018). In the present study, there was a significant increase in the number of transmissible phenotypes. Some physical and psychological repercussions are due to aging and contribute to the pronouncement of CNCD and the exacerbated use of medications (Lutz *et al.,* 2017). The elderly make up the age group that most uses drugs, specifically because of the development of NCDs, which are more common in this population (Gontijo *et al.,* 2012). In Brazil, the use of several drugs (polypharmacy) is widely observed among individuals aged 60 years or older (Da Silva *et al.,* 2017; Martin *et al.,* 2005). In a study, it was found that 35.4% of the interviewees use polypharmacy, and the durability of this action is greater with aging, and tends to increase over the years (Alves and Ceballos, 2018; Moehlecke, 2012; Pereira *et al.,* 2017; Sales *et al.,* 2017). Pharmacotherapy is an essential tool used in the treatment, maintenance and recovery of the health of the elderly, becoming in several cases responsible for the continuity of life (Ramos *et al.,* 2016). About 60 million Brazilians have at least one chronic illness and a great part of it makes continuous use of medicines to preserve the control of sickness and, therefore, reduces the negative effects on the quality of life (Secretariat of Human Rights of the Presidency of the Republic, 2013). Research related to the health of the elderly reveals that it is possible to reduce physical and cognitive losses by encouraging the regular practice of physical activity and healthy eating (Alencar *et al.,* 2018; Souza *et al.,* 2013). The promotion of increasing the number of physically active individuals on a regular basis, generates greater savings in the public health sector, reduces the use of

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medicines, reduces the number of hospitalizations and benefits the health, enabling the longevity to establish itself in the middle (CMC), which promotes a reduction in cases of Common Mental Disorders (CMD) (Camboim *et al.,* 2017, Neto, 2018; Sousa *et al.,* 2017). This lifestyle, coupled with changes in behavioral and eating habits, can help control and prevent diseases and reduce polypharmacy, which has a positive influence on social, physical and psychological aspects (Flesch *et al.,* 2017; Martin *et al.,* 2005; Södergren, 2013, Tramontino *et al.,* 2017). In view of the above, the present study aims to evaluate the level of physical activity and mental disorder common in elderly people who use chronic medications in the city of Vitória da Conquista, Bahia.

MATERIALS AND METHODS

This is a quantitative, observational and transversal study, in Vitória da Conquista, a municipality in the interior of Bahia (latitude: 14º 51 '58 "S; longitude: 40º 50' 22" W). The present work is a cut of a larger project named "Epidemiological Profile of Chronic Diseases in Southwest Bahia". The members were clarified on the techniques used for collection, according to Resolution 466/12 (National Health Council), which constitutes international documents of research involving human beings. It is noteworthy that the project was approved by the Research Ethics Committee (Opinion No. 1,859,545). Sample was composed of 128 elderly of both genders, being 97 of the feminine gender and 31 of the masculine gender. As inclusion specifications for composition of the inclusion criteria, the survey included the elderly who accepted and agreed to sign the Informed Consent Form (TCLE), similarly those who answered the questionnaires selected to obtain the results. For the description of the cutoff specifications, the elderly were excluded from the research, living in long-term institutions and those under 60 years of age. To obtain the data, we chose the BECK anxiety and depression questionnaire (Sousa *et al.,* 2017; Tolentino *et al.,* 2018) which contains 21 items, 19 of which correspond to the symptoms or attitudes and 02 that refer weight loss and decreased libido (Semenoff *et al.,* 2015, Santos, 2014). Elder Abuse: was also used *The multinational Prevalence Survey* - ABUEL to obtain data on the use of drugs for pain, cardiac dysfunctions, diabetes and depression, as well as the diagnosis of mental disorders (depression and anxiety) through the following questions: During the past two weeks, have you used any medication that was prescribed for you by a doctor? "," Do you use heart medicine? ". "Do you use medication for depression? "," Do you use diabetes medicine? "," Have you had the diagnosis, issued by a doctor, of depression? "," Have you had the diagnosis, issued by a doctor, of anxiety? ". For the analysis of the practice and the level of physical activity was analyzed through the International Physical Activity Questionnaire (IPAQ) short version (Seron *et al.,* 2015; Sousa *et al.,* 2017), this variable has two levels: 150 min / week and ≥150 min / week of physical activity (Fernandez-Navarro *et al.,* 2018). The data were processed and tabulated in the EXCEL program and the statistical analyzes were performed using SPSS®, Version 25.0 statistical software. Descriptive analysis were carried out to characterize the sample, in which the statistical test used was the Pearson chi-square test. The level of significance was set at $p < 0.05$ of reliability.

RESULTS

There were 128 elderly people of both genders, of whom 97 were female (75.8%) and 31 were male (24.2%). Of these, 32.6 and 61.2% of the elderly reported having anxiety and depression, respectively. It should be noted that most were categorized as non-active, represented by 79.1% of the sample. In relation to the elderly who used medication, the majority reported the use of pain and depression medication, 49.2 and 61.2%. The description of the sample is further detailed in Table 1.

Table 1. Description and characteristics of the sample

Variables		n	%
Gender	Female	97	75.8
	Male	31	24.2
Anxiety	With anxiety	42	32.6
	No anxiety	87	67.4
Depression	With depression	79	61.2
	No depression	50	38.8
Physical activity	Active	27	20.9
	Inactive	102	79 , 1
Pain Med.	Yes	63	49.2
	No	65	50.8
Med. For depression	Yes	79	61.2
	No	50	38.8
Med. For heart	Yes	35	27.8
	No	91	72.2
Med. For diabetes	Yes	28	21.7
	No	101	78.2
Sources of research, 2018			

Table 2. Association between medication use, physical activity, depression and anxiety

Variables		Physical Activity			Depression			Anxiety		
		Inactive	Active	p-value	without	with	p-value	without	with	p-value
		n (%)	n (%)		n (%)	n (%)		n (%)	n (%)	
Med. Pain	Never	52 (51.0)	13 (50.0)	0.929	30 (61.2)	35 (44.3)	0.063	46 (53.5)	19 (45.2)	0.381
	Daily use	50 (49.0)	13 (50.0)		19 (38.8)	44 (55.7)		40 (46.5)	23 (54.8)	
Med.	Never	34 (33.3)	16 (59.3)	0.014 *	50 (100)	0	0.000 *	40 (46.0)	10 (23.8)	0.015 *
Depression	Regular Use	68 (66.7)	11 (40.7)		0	79 (100)		47 (54.0)	32 (76.2)	
Med. Heart	Never	66 (66.7)	25 (92.6)	0.008 *	42 (84.0)	49 (64.5)	0.017 *	68 (81.0)	23 (54.8)	0.002 *
	Daily use	33 (33.3)	2 (7.4)		8 (16.0)	27 (35.5)		16 (19.0)	19 (45.2)	
Med. Diabetes	Never	80 (78.4)	21 (77.8)	0.942	41 (82, 0)	60 (75.9)	0.417	66 (75.6)	35 (83.3)	0.335
	Daily use	22 (21.6)	6 (22.2)		9 (18.0)	19 (24.1)		21 (24,1)	7 (16,7)	

Table 2 shows that the elderly who use drugs for pain, depression, heart and diabetes represent more than half and were considered as insufficiently active, suffering from depression and without anxiety. It was found an association between the use of medications for depression, heart and physical activity level, p≤0,014 and ≤0.08, in due order. Older people with depression reported having a higher consumption of pain, heart and diabetes medications compared to those who did not have depression. For those who were considered anxious, the greatest use was of drugs for heart. There was also a significant association between the use of drugs for depression and heart in anxious people, p≤0,015 and p0.02, respectively. Table 2 reinforces information on medication use, physical activity level, depression and anxiety, as well as their associations.

DISCUSSION

In the findings described above, it was verified that 79.1% of the elderly were classified as inactive, a habit that is not compatible with health maintenance, decreasing quality of life and leading to physical and psychological declines (Howitt *et al.,* 2016; Macías *et al.,* 2014). Well documented, regularity in the practice of physical activity has the potential to reduce the risks of non communicable chronic diseases (Chastin *et al.,* 2015; Patnode *et al.*) which is usually recommended as a non-pharmacological, effective, initial treatment for many diseases such as high blood pressure, diabetes, depression, stress and anxiety, decreasing drug dependence to control pathologies (Fernandez- Navarro *et al.,* 2018; Holvast *et al.,* 2017; Panahi and Tremblay, 2018). The majority of the elderly diagnosed with depression (55.7%) used drugs to reduce pain, and this requirement (diagnosis of depression) exacerbates psychosomatic perceptions, suggesting that pain in depressives is evidenced because of the present neuroinflammatory condition (Fang *et al.,* 2019, Miller & Kaiser, 2018; Zis *et al.,* 2017). It was found that TMC signals and psychopathological signs were associated with exacerbation of pain response, which may enhance the use of drugs (Kivrak *et al.,* 2016; Rogers *et al.,* 2015). The use of antidepressants was significantly associated with the level of physical activity and people with anxiety, p≤0.014 and ≤0.015, respectively, showing that physical activity influences effectively as a non-pharmacological treatment to prevent and attenuate the symptoms of CMD and others disorders (Andersson *et al.,* 2015; Phillips, 2017). A therapeutic alternative that calls attention, has shown consistent evidence for the mitigation of depressive neurobiology through mechanisms involving brain derived neurotrophic factor (BDNF) (Phillips, 2017). Most elderly patients diagnosed with anxiety use antidepressants daily (76.2%), corroborating with statements that this mental condition may be the gateway to the development of major depressive disorder, which when associated, becomes more aggressive and is known as mixed mental disorder (Adamek and Slater, 2012; Grover *et al.,* 2018; Yu *et al.,* 2016). It should be emphasized that the above statement justifies the increased use of drugs for depression by anxious elderly people. Inactive elderly patients with depression and anxiety had the highest consumption of medications for the heart, in which a significant association was found with p≤0.008, p≤0.017 and ≤0.002, in this order. The literature reveals that mental disorders and cardiovascular diseases coexist, and CMD can lead to a decrease in physical activity and inadequate nutrition, compromising general and vascular health (Małyszczak and Rymaszewska, 2016), one of the mechanisms explaining this Association. In addition, depression can cause physiological (behavioral) dysfunction and behavioral dysfunction (low physical activity, sedentary behavior, smoking, alcoholism) that leads to cardiovascular disease (Cohen *et al.,* 2015; Egger *et al.,* 2008; Reavell *et al.,* 2018). Most of the elderly have some chronic pathology that compromises well-being and daily activities, such as stroke (Michas *et al.,* 2018), associated with this, the psychological and social declines that affect health so thus increasing the risk for mental disorders (Masumoto, Sato, Maeno, Ichinohe, &Maeno, 2017). In these conditions, the elderly are submitted to the use of several drugs to control and treat pathologies and comorbidities (Gentil *et al.,* 2017; Masumoto *et al.,* 2017). The report of medication use for diabetes was low, being more expressive in the elderly inactive and with depression, no significant association values were found. However, this finding serves as an alert for a synergistic potential among the pathologies involved, and may be detrimental to involvement with other comorbidities and also due to polypharmacy (Kostev and Jacob, 2018; Onoue *et al.,* 2018). Chronic use of polypharmacy by the elderly can cause undesirable drug interactions, rendering them apathetic, less active, sedentary, and prone to functional loss and increase in body weight (Hammond and Wilson, 2013; Pamoukdjian *et al.,* 2017). Habits that lead to social isolation, poor quality of life and deterioration of physical and mental health (World Health Organization, 2017).

Final Considerations

In the study, it was verified that the elderly studied are, for the most part, sedentary and use several medications daily to control chronic pathologies. The continuous use of medications (polypharmacy) can cause negative repercussions in the life of the elderly, leaving him more lethargic, incapacitated, apathetic. The aforementioned factors contribute in reducing their capacity for socialization and increase isolation. In addition, mental damage can be perceived by the large number of elderly people with mental disorders, which makes the subject a public health concern, since it evidences the need for a more precise care, positively comprising the stages of aging, primarily of the health care. Therefore, there is a need for further studies that reinforce the need of the elderly for alternative treatments that do not diminish their health and vitality. Whether pharmacological or non-pharmacological, treatment must be effective to improve quality of life and health and not impair it.

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