Original Article

https://doi.org/10.1590/2317-6431-2024-2901en

Audiology Communication Research
ISSN 2317-6431

Prevalence of vestibular complaints in psychiatric patients of mental health centers in the metropolitan region of Porto Alegre

Prevalência de queixas vestibulares em pacientes psiquiátricos de uma cidade da Região Metropolitana de Porto Alegre

Anghelis Silveira dos Santos[1], *Augusto Astolfi Basile*[2], *Morgana Scheffer*[3], *Cristina Loureiro Chaves Soldera*[1]

ABSTRACT

Purpose: To identify the prevalence of vestibular complaints in the psychiatric population of a mental health center in a city of the metropolitan region of Porto Alegre. **Methods:** The data were collected in the institution by a questionnaire, which contained a brief anamnesis and the "Dizziness Handicap Inventory - Brazilian Version". **Results:** The major part of the sample was composed by young adults (55.9%) and female (76.5%). The presence of dizziness at some period of day (always or sometimes) affects 67.7% of the subjects interviewed. Most of them use psychiatric pharmaceuticals (94.1%). **Conclusion:** It was possible to conclude that there is a high prevalence of dizziness in the researched psychiatric population, the major impact being in subjects who use bipolar and mania pharmacal and subjects diagnosed with depressive disorder. As to association between vestibular complaints and psychiatric disorders, a significant association between dizziness and depressive disorders (p=0.033) and the absence of dizziness complaints and depressive episodes (p=0.031) was found.

Keywords: Speech and hearing therapy; Neuro-otology; Mental disorders; Anxiousness; Depression; Humor disorders; Dizziness; Psychotropics

RESUMO

Objetivo: Identificar a prevalência das queixas vestibulares na população psiquiátrica de um centro de saúde mental de uma cidade da Região Metropolitana de Porto Alegre. **Métodos:** Os dados foram coletados na instituição, por meio de um formulário composto por uma breve anamnese, e pelo *Dizziness Handicap Inventory - Brazilian Version*. **Resultados:** A maior parte da amostra foi composta por adultos jovens (55,9%) e do gênero feminino (76,5%). A presença de tontura em algum momento do dia (sempre ou às vezes) acometia 67,7% dos sujeitos da amostra. A grande maioria fazia uso de fármacos psiquiátricos (94,1%). **Conclusão:** Existe uma elevada prevalência de tontura na população psiquiátrica pesquisada, sendo verificado maior impacto do sintoma em sujeitos que fazem uso de fármacos para bipolaridade e mania e em sujeitos diagnosticados com transtorno depressivo. Com relação à associação das queixas vestibulares à categoria de transtorno psiquiátrico, constata-se associação significativa entre queixa de tontura e transtornos depressivos (p=0,033) e ausência de queixa de tontura e episódios depressivos (p=0,031).

Palavras-chave: Fonoaudiologia; Neurotologia; Transtornos mentais; Ansiedade; Depressão; Transtornos do humor; Tontura; Psicotrópicos

Study carried out at Universidade Federal de Ciências da Saúde de Porto Alegre – UFCSPA – Porto Alegre (RS), Brasil.
[1]Universidade Federal de Ciências da Saúde de Porto Alegre – UFCSPA – Porto Alegre (RS), Brasil.
[2]Universidade Federal de Pelotas – UFPel – Pelotas (RS), Brasil.
[3]Irmandade Santa Casa de Misericórdia de Porto Alegre – ISCMPA – Porto Alegre (RS), Brasil.
Conflict of interests: No.
Authors' contribution: ASS participated in the conception of the study, collection, analysis, and interpretation of data and writing of the manuscript; AAB participated in data collection and interpretation; MS participated as a co-supervisor in the interpretation of data and correction of the manuscript; CLCS participated as a supervisor in the design of the study, analysis, interpretation of data and writing of the manuscript.
Funding: None.
Corresponding author: Anghelis Silveira dos Santos. E-mail: anghelissilveira@gmail.com
Received: February 19, 2024; **Accepted:** June 19, 2024

INTRODUCTION

Psychiatric disorders seem to play an important role in the course of vestibular issues, being the focus of scholars since before the 19th century and being present in 20% to 50% of cases of idiopathic dizziness[1,2]. Anxiety, depression, mood, and memory disorders are those most related to vestibular complaints, and this relationship was first identified within the Freudian theory of anxiety[3,4]. Otoneuropsychology considers dizziness as one of the main manifestations of anxiety and as its somatic equivalent[5].

In mental health centers, the use of antidepressant and benzodiazepine medications is common, therefore, it is worth considering that vestibular complaints present in patients may be part of the spectrum of adverse effects of these medications. Antidepressants are divided into five classes, the most commonly used of which are selective serotonin reuptake inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs), and tricyclics[6].

Among the side effects of SSRIs is nausea - as derived from gastrointestinal disorders - along with diarrhea and emesis, as well as daytime drowsiness, which can be confused with vestibular symptoms. Nausea and dizziness are also included in the adverse effects profile of SNRIs, especially those that are most widely used: venlafaxine and desvenlafaxine. The side effects of tricyclic antidepressants also include dizziness, nausea, and drowsiness, along with orthostatic hypotension, due to alpha-adrenergic blockade, a symptom that can be confused with vestibular dysfunction by some patients. In parallel, benzodiazepines promote ataxia, daytime drowsiness, and cognitive impairment[7].

Self-perception questionnaires, such as the Dizziness Handicap Inventory - Brazilian version (DHI-BV)[8], are widely used to measure the degree of impact of dizziness on an individual's quality of life. This questionnaire quantifies the degree of participation restriction (handicap) related to the symptom of dizziness and allows the quantification of the vestibular complaints of the affected subjects.

Due to the high prevalence of dizziness symptoms in the population and the frequent association of these symptoms with psychiatric disorders[8], the present study aimed to verify the prevalence of vestibular complaints in the psychiatric population of mental health centers in a city in the Metropolitan Region of Porto Alegre.

METHODS

This is a cross-sectional observational study carried out in a mental health center in a city in the Metropolitan Region of Porto Alegre and approved by the institution's Ethics and Research Committee (CEP), under ruling no. 5.935.882.

Service users were questioned by the researcher in the site's waiting room, on random days from Monday to Saturday, from March to June 2023. Then, they were asked about their interest in participating in a study on dizziness, those who agreed received the Free and Informed Consent Form (TCLE) to read and sign, which included permission to use data from service records to obtain information regarding the diagnosis of psychiatric disorders and medications. For illiterate subjects who wanted to participate, the form was read and then the consent or assent was recorded, following the rules of CNS Resolution No. 510/2016, through electronic and digital media[9].

After taking an anamnesis, respondents were asked if they felt dizzy at any point during the day. For those who responded affirmatively, the DHI-BV[10] questionnaire was administered, which assesses the degree of handicap related to dizziness, lasting approximately ten minutes. The instrument consists of 25 questions[8]. Each of the items has three answer options: "yes", "sometimes" and "no", which are scored 4, 2, and 0, respectively. The total possible DHI-BV score ranges from 0 (no handicap) to 100 (maximum handicap). The higher the score, the greater the degree of perceived handicap. The DHI-BV scores can be classified into the three domains of self-perceived handicap and a total score categorizing the degree of handicap according to the score: from 0 to 30 mild, from 31 to 60 moderate, and from 61 to 100 severe[11].

The inclusion criteria in the research were subjects aged 18 years or over, of both genders, who were undergoing monitoring, treatment, or receiving care at the place where the study was conducted. Exclusion criteria included subjects with a single session of care at the center, that is, who were not systematically attending the location, and subjects without an established diagnosis of the type of mental disorder per the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)[12]. For data analysis purposes, the sample was divided into three age groups: A (18 to 39 years old), B (40 to 59 years old), and C (60 years old and over)[13].

The questionnaires were read by the researcher and answered orally by the interviewees, and the responses were recorded directly in an Excel® spreadsheet. Subjects who presented a severe degree in the DHI-BV criteria received a referral to their reference Basic Health Unit (UBS).

Psychiatric disorders were grouped according to each patient's psychiatric diagnosis, indicated by the center's psychiatrist or physicians from other locations. The drugs were grouped according to their mechanism of action. The data were collected by the researcher from the patients' records, with prior authorization.

The results of the variables were presented using absolute and relative frequencies. Associations were verified using the Chi-Square and/or Fisher's Exact tests. Multivariate analyses were performed using Poisson regression analysis with robust variance adjustment and Prevalence Ratio (PR) estimates with a 95% confidence interval were presented. Results with a p-value ≤ 0.05 were considered significant.

The sample calculation was estimated to find a proportion of dizziness of 62.96% in psychiatric patients[14]. With a tolerated absolute error of 11% and 95% confidence in the estimate, 75 patients would be needed to compose the sample. Analyses were performed using SPSS statistical software (IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.).

RESULTS

In the present study, responses from 75 subjects were collected, with the final sample established after applying the inclusion and exclusion criteria (Figure 1), totaling 68 subjects.

Regarding the prevalence of psychiatric disorders diagnosed in the sample subjects (Figure 2), the most prevalent was depressive disorder (n=21; 30.9%), followed by generalized anxiety disorder (n=18; 26.5%). In relation to the use of drugs, the most prevalent classes in the present study sample (Figure 3)

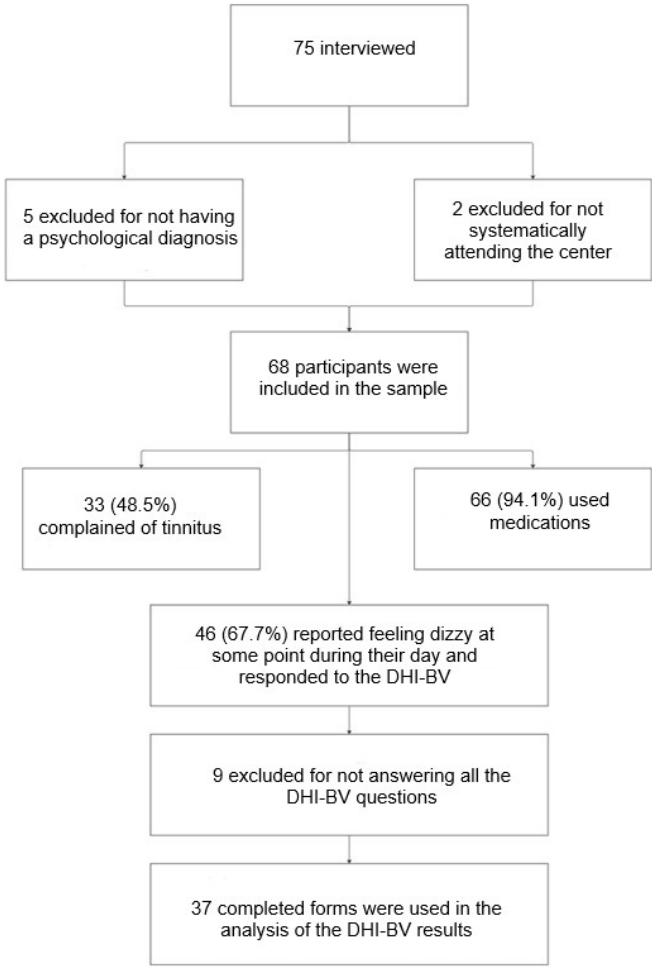

Figure 1. Flowchart for applying the sample inclusion and exclusion criteria
Subtitle: DHI-BV = Dizziness Handicap Inventory - Brazilian Version

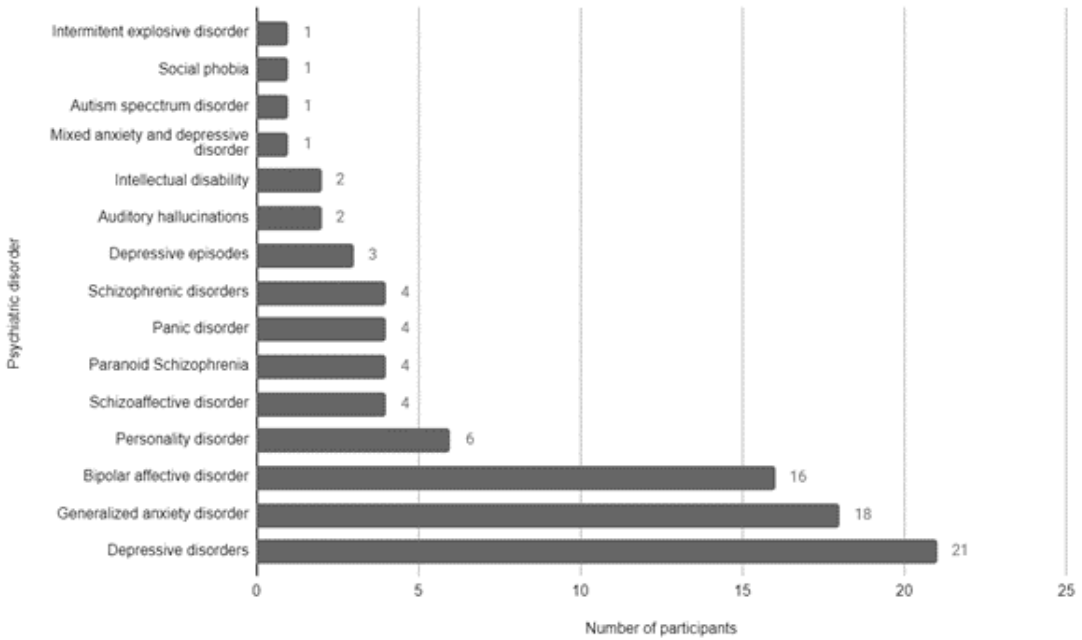

Figure 2. Prevalence of psychiatric disorders in the sample (n=68)
*some subjects had two or more diagnoses

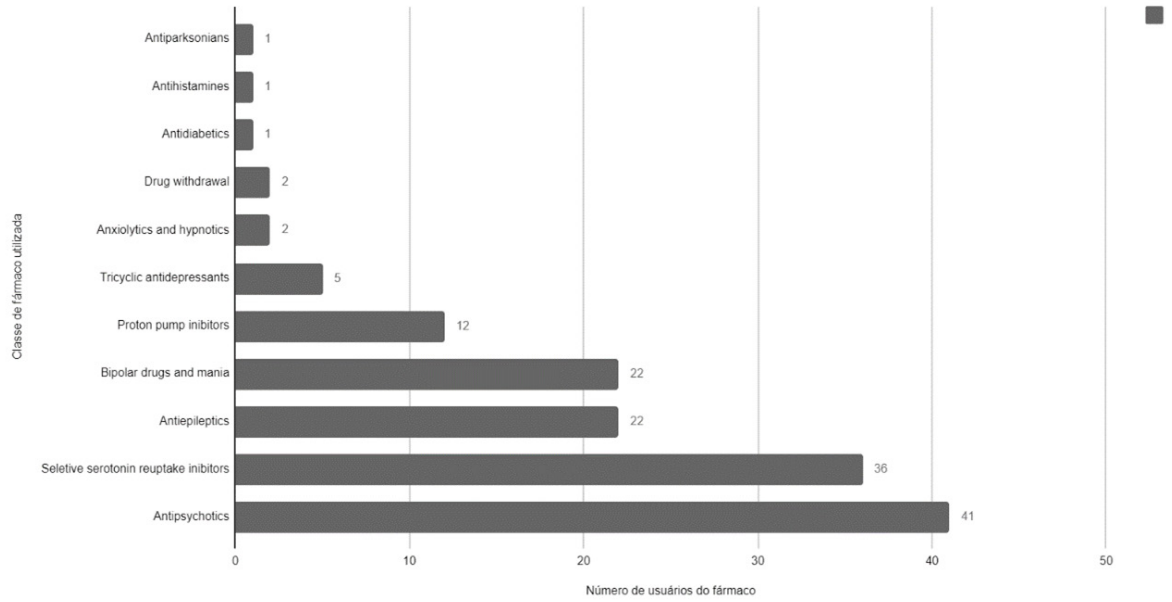

Figure 3. Prevalence of use of each drug class (n=63)
*some subjects used two or more drugs

Table 1. Sample characteristics, prevalence of vestibular complaints, and the use of medications (n=68)

Categories		n	%
Age range	Young adult (<40 years old)	38	55.9
	Mature Adult (40-59 years old)	25	36.8
	Elderly (≥60 years)	5	7.4
Gender	Female	52	76.5
	Male	16	23.5
Ethnicity (self-declared)	White	47	69.1
	Black	5	7.4
	Brown	15	22.1
	Yellow	1	1.5
Feels dizzy at some point during the day	Yes	31	45.6
	Sometimes	15	22.1
	No	22	32.4
Uses medications	Yes	64	94.1
	No	4	5.9

Subtitle: n = number of subjects; % = percentage; < = less than; ≥ = greater than or equal to

were antipsychotics (n=41; 65.1%) and selective serotonin reuptake inhibitors (n=36; 57.1%). It is worth noting that some of the subjects had been diagnosed with more than one type of psychiatric disorder, and could have been using more than one type of drug concomitantly.

The majority of the sample was made up of young adults (55.9%) and the majority of subjects were female (76.5%). The presence of dizziness at some point during the day, always or sometimes, affected 67.7% of the subjects in the sample. The vast majority of subjects were using psychiatric drugs (94.1%) (Table 1).

Regarding the association of vestibular complaints with the sample characterization and the class of drugs used (Table 2), the presence of complaints of dizziness was more prevalent in mature adults (68%). There was no significant association between the use of non-psychiatric drugs and vestibular complaints.

Regarding the association of vestibular complaints with the psychiatric disorder category (Table 3), a significant association was found between complaints of dizziness and depressive disorders (p=0.033) and the absence of complaints of dizziness and depressive episodes (p=0.031).

When verifying the association of the degree of handicap in the DHI-BV with the sample characterization, class of drug in use, and category of psychiatric disorder (Table 4), a significant association was noticed between the use of drugs for paranoid schizophrenia and the mild degree of handicap at the DHI-BV (p=0.043). The use of drugs for bipolar disorder and mania continued to the severe degree of DHI-BV handicap (p=0.043).

When comparing DHI-BV scores by domain and overall with type of drug and type of psychiatric disorder, a significant difference was found in the scores of subjects who used drugs for bipolar disorder/mania, with higher scores (higher degree

Table 2. Association of auditory/vestibular complaints with sample characteristics and class of drug used (n=68)

Variables		Total	Complaint of dizziness		
		n	n	%	p-value
Age range	Young Adult (<40)	38	24	63.2	0.254
	Mature Adult (40-59)	25	17	68.0	
	Elderly (>=60)	5	5	100.0	
Gender	Female	52	35	67.3	0.914
	Male	16	11	68.8	
Use of medications	Yes	64	44	68.8	0.590
	No	4	2	50.0	
Drug classes					
Antiepileptics	Yes	22	14	63.6	0.564
	No	41	29	70.7	
Antipsychotics	Yes	41	28	68.3	0.993
	No	22	15	68.2	
Selective Serotonin Reuptake Inhibitors	Yes	36	25	69.4	0.815
	No	27	18	66.7	
Drugs for Bipolar and Mania	Yes	22	18	81.8	0.090
	No	41	25	61.0	
Anxiolytics and hypnotics	Yes	2	1	50.0	0.538
	No	61	42	68.9	
Tricyclic Antidepressants	Yes	5	4	80.0	1.000
	No	58	39	67.2	

Chi-Square/Fisher's exact test with a significance level of p≤0.05
Subtitle: n = number of subjects; % = percentage; < = less than; >= = greater than or equal to

Table 3. Association of vestibular complaints with the category of psychiatric disorder (n=68)

Psychiatric disorder category		Total	Dizziness complaint		
		n	n	%	p-value
Generalized anxiety disorder	Yes	18	15	83.3	0.097
	No	50	31	62.0	
Depressive disorders	Yes	21	18	85.7	**0.033**
	No	47	28	59.6	
Bipolar affective disorder	Yes	16	9	56.3	0.265
	No	52	37	71.2	
Auditory hallucinations	Yes	2	2	100.0	1.000
	No	66	44	66.7	
Schizoaffective disorder	Yes	4	3	75.0	1.000
	No	64	43	67.2	
Mixed Anxiety and Depressive Disorder	Yes	1	1	100.0	1.000
	No	67	45	67.2	
Personality disorder	Yes	6	3	50.0	0.380
	No	62	43	69.4	
Autism Spectrum Disorder	Yes	1	0	0.0	0.324
	No	67	46	68.7	
Intellectual disability	Yes	2	2	100.0	1.000
	No	66	44	66.7	
Social phobia	Yes	1	1	100.0	1.000
	No	67	45	67.2	
Intermittent explosive disorder	Yes	1	0	0.0	0.324
	No	67	46	68.7	
Paranoid schizophrenia	Yes	4	3	75.0	1.000
	No	64	43	67.2	
Depressive Episodes	Yes	3	0	0.0	**0.031**
	No	65	46	70.8	
Panic Disorder	Yes	4	4	100.0	0.296
	No	64	42	65.6	
Schizophrenic disorders	Yes	4	2	50.0	0.590
	No	64	44	68.8	

Chi-Square/Fisher's exact test with a significance level of p≤0.05
Subtitle: n = number of participants; % = percentage

Table 4. Association of the degree of handicap in the Dizziness Handicap Inventory - Brazilian Version with the sample characteristics, class of drug used, and category of psychiatric disorder (n=37)

Variables	Handicap Degree (DHI-BV)	Total	Mild		Moderate		Severe		p-value
		n	n	%	n	%	n	%	
Age range	Young Adult (<40)	20	4	20.0	5	25.0	11	55.0	0.862
	Mature adult (40-59)	13	1	7.7	3	23.1	9	69.2	
	Elderly (>=60)	4	1	25.0	1	25.0	2	50.0	
Biological sex	Female	31	5	16.1	7	22.6	19	61.3	0.840
	Male	6	1	16.7	2	33.3	3	50.0	
Use of pharmaceuticals	Yes	35	5	14.3	9	25.7	21	60.0	0.362
	No	2	1	50.0	0	0.0	1	50.0	
Drug class									
Antiepileptics	Yes	11	2	18.2	4	36.4	5	45.5	0.541
	No	23	3	13.0	5	21.7	15	65.2	
Antipsychotics	Yes	22	4	18.2	3	13.6	15	68.2	0.070
	No	12	1	8.3	6	50.0	5	41.7	
SSRI	Yes	18	2	11.1	6	33.3	10	55.6	0.581
	No	16	3	18.8	3	18.8	10	62.5	
Drugs for Bipolar and Mania	Yes	16	1	6.3	2	12.5	13	81.3	**0.043**
	No	18	4	22.2	7	38.9	7	38.9	
Anxiolytics and hypnotics	Yes	1	0	0.0	1	100.0	0	0.0	0.239
	No	33	5	15.2	8	24.2	20	60.6	
Tricyclic Antidepressants	Yes	3	0	0.0	1	33.3	2	66.7	0.749
	No	31	5	16.1	8	25.8	18	58.1	
Disorder Category									
Generalized anxiety disorder	Yes	11	1	9.1	1	9.1	9	81.8	0.192
	No	26	5	19.2	8	30.8	13	50.0	
Depressive disorders	Yes	13	2	15.4	3	23.1	8	61.5	0.982
	No	24	4	16.7	6	25.0	14	58.3	
Bipolar affective disorder	Yes	8	2	25.0	1	12.5	5	62.5	0.580
	No	29	4	13.8	8	27.6	17	58.6	
Auditory hallucinations	Yes	2	0	0.0	0	0.0	2	100.0	0.486
	No	35	6	17.1	9	25.7	20	57.1	
Schizoaffective disorder	Yes	3	1	33.3	2	66.7	0	0.0	0.085
	No	34	5	14.7	7	20.6	22	64.7	
Mixed Anxiety and Depressive Disorder	Yes	1	0	0.0	1	100.0	0	0.0	0.202
	No	36	6	16.7	8	22.2	22	61.1	
Personality disorder	Yes	3	0	0.0	2	66.7	1	33.3	0.191
	No	34	6	17.6	7	20.6	21	61.8	
Intellectual disability	Yes	1	0	0.0	0	0.0	1	100.0	0.704
	No	36	6	16.7	9	25.0	21	58.3	
Paranoid schizophrenia	Yes	3	2	66.7	0	0.0	1	33.3	**0.043**
	No	34	4	11.8	9	26.5	21	61.8	
Panic Disorder	Yes	4	1	25.0	0	0.0	3	75.0	0.476
	No	33	5	15.2	9	27.3	19	57.6	

Chi-Square/Fisher's exact test with a significance level of p≤0.05

Subtitle: DHI-BV = Dizziness Handicap Inventory - Brazilian Version; n = number of subjects; % = percentage; < = less than; (>= greater than and equal to; SSRI = selective serotonin reuptake inhibitors

of handicap) in the emotional domain (p=0.006) and overall (p=0.004). In subjects with paranoid schizophrenia, there was a significant difference in the physical domain score, significantly lower (lower degree of handicap) in subjects with the disorder (p=0.032). Subjects with schizoaffective disorder had significantly lower scores (lower degree of handicap) in the functional (p=0.017), emotional (p=0.008), and general score (p=0.017) domains when compared to subjects without the disorder.

DISCUSSION

In Brazil, data on the prevalence of dizziness are conflicting, as it is an underdiagnosed complaint[15]. A study carried out in the state of São Paulo presented data that 42% of the population experience dizziness, however, only 46% of these seek help[16]. In contrast, another more recent analysis carried out in the state of Minas Gerais showed a prevalence of only 7.4%[17]. In the

present study, the prevalence of dizziness complaints was much higher than that found in the literature, reaching 67.7% of the research subjects. This finding could be explained by the fact that the target population was composed only of psychiatric patients, not representing the general population.

It is considered that psychological issues can complicate and interfere with the habituation and adaptation processes, generating an increase in vestibular symptoms[18]. Research shows that patients with dizziness of peripheral origin are more likely to experience depression and anxiety[19]. The results of this study are in line with findings in the literature, since, among psychiatric disorders, the most prevalent within Primary Health Care (PHC) was depressive disorder (31.4%). It reached 30.9% of the sample, followed by anxiety disorder (18.1%), which was diagnosed in 26.5% of the subjects[20].

As for drugs, according to the literature[21], the most used category in PHC is anxiolytics, specifically benzodiazepines, followed by antidepressants. The results of this study differed since the most used drugs were antipsychotics, and, only then, selective serotonin reuptake inhibitors appeared.

The prevalence of dizziness of vestibular origin was three times higher in elderly people than in young adults[22]. All elderly research subjects experienced dizziness. The studies found presented conflicting results regarding the proportion of occurrence of psychogenic vertigo according to gender. Some authors report a higher prevalence in females. However, they report that the groups studied were mostly composed of women, reaching proportions of up to 4:1 and making it difficult to carry out an adequate analysis of this aspect[16,23,24]. In this study, a 13:4 ratio of women to men was observed. Furthermore, it was noticed that women who attended the center were more open and willing to respond to the researchers.

Although dizziness is included in the profile of common adverse effects of several drugs in the classes studied, there is no evidence of this relationship[7]. Likewise, iatrogenesis promoted by the medications in question may involve nausea and drowsiness, symptoms capable of causing confusion with dizziness among patients and culminating in biases. The data obtained in the present study showed a significant association between the greatest impact on quality of life, obtained from the DHI-BV, and medications for bipolar disorder and mania.

During the collections, some subjects reported that they began monitoring at the service after the onset of dizziness, as the symptom left them incapacitated and unmotivated, raising the possibility that dizziness was one of the causes or aggravating factors of depression. According to researchers[5], some psychological symptoms can be a cause, consequence or coexist with dizziness onsets.

Depressive episodes can occur in the lives of individuals without falling within the diagnosis of depressive disorder. For these episodes to be considered a disorder, the subject must have experienced two or more depressive episodes[25]. Therefore, based on the results found in the present research, it is possible to suggest that depressive disorder may be related to the presence of dizziness symptoms in affected subjects. The occurrence of a single depressive episode brings an inversely proportional result, but with the same statistical relevance, indicating the non-appearance of the symptom.

The significant association between a higher degree of handicap related to dizziness and the use of medications to treat bipolar disorder and mania could be expressed by the active ingredient of lithium salts and the fact that the symptom of dizziness is a common side effect of the use of this medication. At the same time, the broad para-effect profile of the use of lithium salts can maximize the impression of dizziness, considering that the medicine can be toxic to the human body. The mechanism causing the symptom is poorly understood, since lithium acts under an unknown mechanism of action. However, the presence of a high handicap in the degeneration of the quality of life of the patient using such medication is characteristic of its toxicity[7,26].

Sensoriperceptual changes caused by the spectrum of schizophrenia disorders may be responsible for significant relationships in the emotional and functional domains. Subjects affected by this psychopathology do not perceive the difference between what would be healthy and the changes caused by the disease[27]. Therefore, it is recommended that further studies be carried out on the cause-and-effect relationship between this diagnosis and the onset of dizziness complaints. The changes in perception caused by schizophrenia spectrum disorders are very varied, and it is not clear what the causal factor of the complaint is in this group.

For future studies, it is recommended that the sample be classified by psychiatric disorders before data analysis, as a criterion for grouping the sample subjects. This may have been a limitation of the present study, as some subjects had the disorders as comorbidities. This division, however, if carried out in the present study, would distance the sample from reality, as the heterogeneity of disorders is a characteristic of mental health centers. The need for more research in this field is emphasized, especially in relation to the male population.

With this study, it was noticed that the complaint of dizziness in the psychiatric population is undervalued, since the psychiatric disorder is a serious condition and that it depreciates the importance of other complaints. Considering the complexity of the psychiatric population and the frequent use of medication by these subjects, the option of a non-pharmaceutical intervention – such as vestibular rehabilitation – could improve patients' quality of life, minimizing the symptoms of dizziness, which would already be an important benefit.

CONCLUSION

There is a high prevalence of dizziness in the psychiatric population surveyed. Furthermore, there is a greater impact of the symptom of dizziness in subjects who use drugs for bipolar disorder and mania, when compared to those who use other medications. A significant association was found between symptoms of dizziness and depressive disorder.

REFERENCES

1. Brandt T. Phobic postural vertigo. Neurology. 1996;46(6):1515-9. http://doi.org/10.1212/WNL.46.6.1515. PMid:8649539.

2. Gurgel JDC, Costa KVT, Cutini FN, Sarmento KMA Jr, Mezzasalma MA, Cavalcanti HVR. Dizziness associated with panic disorder and agoraphobia: case report and literature review. Rev Bras Otorrinolaringol. 2007;73(4):569-72. http://doi.org/10.1590/S0034-72992007000400018. PMid:17923930.

3. Freud S, Zwicker RUC, Paulo E. O futuro de uma ilusão. Porto Alegre: L&PM Pocket; 2010.

4. Lima CL, Cutolo MB, Betoni PV, Paulino C. Queixas psicológicas relacionadas com as disfunções vestibulares em pacientes atendidos em um ambulatório de reabilitação vestibular. Rev Eq Corpor Saúde. 2016;7(2):37. http://doi.org/10.17921/2176-9524.2015v7n2p37-40.

5. Paiva AD, Kuhn AMB. Sintomas psicológicos concomitantes à queixa de vertigem em 846 prontuários de pacientes otoneurológicos do Ambulatório de Otoneurologia da Universidade Federal de São Paulo - Escola Paulista de Medicina. Rev Bras Otorrinolaringol. 2004;70(4):512-5. http://doi.org/10.1590/S0034-72992004000400012.

6. Silva SN, Lima MG, Ruas CM. Uso de medicamentos nos Centros de Atenção Psicossocial: análise das prescrições e perfil dos usuários em diferentes modalidades do serviço. Ciênc Saúde Colet. 2020;25(7):2871-82. http://doi.org/10.1590/1413-81232020257.23102018. PMid:32667568.

7. Whalen K, Finkel R, Panavelil TA. Farmacologia ilustrada. Porto Alegre: Artmed; 2016. p. 121-57.

8. Pimentel BN, Santos VAV Fa. Ocorrência de condições psiquiátricas, uso de psicotrópicos e sua relação com o equilíbrio postural em sujeitos com tontura. CoDAS. 2019;31(3):e20180111. http://doi.org/10.1590/2317-1782/20182018111. PMid:31271579.

9. Brasil. Conselho Nacional de Saúde. Resolução nº 510, de 7 de abril de 2016. Diário Oficial da União [Internet]; Brasília; 2016 [citado em 2023 Jul 10]. Disponível em: https://conselho.saude.gov.br/resolucoes/2016/Reso510.pdf

10. de Castro ASO, Gazzola JM, Natour J, Ganança FF. Versão brasileira do Dizziness Handicap Inventory. Pro Fono. 2007;19(1):97-104. http://doi.org/10.1590/S0104-56872007000100011. PMid:17461352.

11. Whitney SL, Wrisley DM, Brown KE, Furman JM. Is perception of handicap related to functional performance in persons with vestibular dysfunction? Otol Neurotol. 2004;25(2):139-43. http://doi.org/10.1097/00129492-200403000-00010. PMid:15021773.

12. Crippa JAS. Manual diagnóstico e estatístico de transtornos mentais: DSM -5 -TR. 5. 5ª ed. Porto Alegre: Artmed; 2022.

13. Castro TPPG, Tenório YCA, Castro MTPG. Tontura e zumbido em pacientes com transtorno de ansiedade e/ou depressivo maior. Rev Eq Corpor Saúde. 2018;9(10):39-42.

14. Marucci FAF. Ciclo vital [Internet]. Ribeirão Preto: Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo; 2023 [citado em 2023 Jul 12]. Disponível em: https://edisciplinas.usp.br/pluginfile.php/5252507/mod_resource/content/1/Aula%20-%20Ciclo%20Vital.pdf

15. Ciríaco JGM, Alexandre PL, Pereira CB, Wang YP, Scaff M. Vertigem postural fóbica: aspectos clínicos e evolutivos. Arq Neur Psiq. 2004;62(3):669-73. http://doi.org/10.1590/S0004-282X2004000400019.

16. Bittar RSM, Lins EMDS. Clinical characteristics of patients with persistent postural-perceptual dizziness. Rev Bras Otorrinolaringol. 2015;81(3):276-82. http://doi.org/10.1016/j.bjorl.2014.08.012. PMid:25382427.

17. Martins TF, Mancini PC, Souza LM, Santos JN. Prevalence of dizziness in the population of Minas Gerais, Brazil, and its association with demographic and socioeconomic characteristics and health status. Rev Bras Otorrinolaringol. 2017;83(1):29-37. http://doi.org/10.1016/j.bjorl.2016.01.015. PMid:27217009.

18. Shu Y, Liao N, Fang F, Shi Q, Yan N, Hu Y. The relationship between psychological conditions and recurrence of benign paroxysmal positional vertigo: a retrospective cohort study. BMC Neurol. 2023;23(1):137. http://doi.org/10.1186/s12883-023-03169-8. PMid:37004007.

19. Chen X, Wei D, Fang F, Song H, Yin L, Kaijser M, et al. Peripheral vertigo and subsequent risk of depression and anxiety disorders: a prospective cohort study using the UK Biobank. BMC Med. 2024 Fev 9;22(1):63. http://doi.org/10.1186/s12916-023-03179-w. PMid:38336700.

20. Costa RP, Bezerra LJR, Figueiredo No DG, Barboza TA. O atendimento ao paciente com transtorno mental na APS: realidade possível. In: Anais do 12º Congresso Brasileiro de Medicina da Família e Comunidade; 2013; Belém. Rio de Janeiro: SBMFC; 2013.

21. Roman G, Werlang MC. O uso de psicofármacos na atenção primária à saúde. Rev Grad. 2011;(1):4.

22. Bittar RSM, Oiticica J, Bottino MA, Ganança FF, Dimitrov R. Estudo epidemiológico populacional da prevalência de tontura na cidade de São Paulo. Rev Bras Otorrinolaringol. 2013;79(6):688-98. http://doi.org/10.5935/1808-8694.20130127. PMid:24474479.

23. Ferreira LSS, Pereira CB, Rossini S, Kanashiro AMK, Adda CC, Scaff M. Psychological assessment in patients with phobic postural vertigo. Arq. Neur. Psiq. 2010;68(2):224-7. http://doi.org/10.1590/S0004-282X2010000200013. PMid:20464289.

24. Prieto Rivera JA, Lora JG, Guzmán JE, Polanía Jácome, EA. Phobic vertigo: a silent pathology. Acta Otorrinolaringol Cir Cabeza Cuello. 2014;42(1):44-8. http://doi.org/10.37076/acorl.v42i1.135.

25. Organização Pan-Americana da Saúde. Depressão [Internet]. 2023 [citado em 2023 Out 22]. Disponível em: https://www.paho.org/pt/topicos/depressao

26. Horita JKHA. Lítio e sua utilização terapêutica no transtorno bipolar [tese]. Belo Horizonte: Faculdade de Farmácia, Universidade Federal de Minas Gerais; 2013.

27. Antunes LLS, Oliveira VM. A produção de sentido sobre o trabalho de portadores de esquizofrenia [Internet]. Repositório Anima Educação; 2019 [citado em 2023 Out 30]. Disponível em: https://repositorio.animaeducacao.com.br/bitstream/ANIMA/10457/4/A%20produ%C3%A7%C3%A3o%20de%20sentido%20sobre%20o%20trabalho%20de%20portadores%20de%20esquizofrenia.pdf