RESEARCH ARTICLE

THE POSSIBLE RELATIONSHIP BETWEEN HEALTH ANXIETY AND VERTIGO

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ABSTRACT
Background: Health anxiety is defined by fears and worries of a severe illness in an otherwise healthy subject. A recent epidemiological study found a point prevalence of 3.4% and a life time prevalence of 5.7% for health anxiety. The term vertigo is a symptom, not a disease.
Aims & Objectives: Health anxiety has not been investigated previously in patients with vertigo complaint. In this study we investigated the possible relationship between health anxiety and vertigo.
Materials and Methods: We performed Short Health Anxiety Inventory (SHAI) scale in Turkish and Beck Anxiety Inventory (BAI) to study group and control group. The study group consisted of 62 patients who admitted to the otolaryngology clinic with vertigo complaint. The control group consisted of 70 healthy subjects.
Results: With regard to the SHAI and BAI scores. With regard to gender and marital status, SHAI and BAI results did not reach significant difference.
Conclusion: Health anxiety and vertigo are common problems that may easily be neglected by busy general practitioners. Otolaryngologists and psychiatrists should be in closer cooperation to diagnose and to treat these health problems.
Key Words: Health Anxiety; Vertigo; Beck Anxiety Inventory (BAI); Short Health Anxiety Inventory (SHAI)

Introduction

Health anxiety is defined by fears and worries of a severe illness in an otherwise healthy subject.[1] The condition consists of two components - perception of a serious illness and the perceived illness which might cause negative results.[2] A recent Australian epidemiological study found a point prevalence of 3.4% and a life time prevalence of 5.7% for health anxiety.[3] Stress, serious illness and exposure to disease related popular media can speed up growing health anxiety. Subclinical forms of health anxiety cause reduced quality of life and more detailed medical examinations leading to increased health care system costs. Health anxiety was found to be significantly associated with any anxiety or affective disorder.[4]

The term "vertigo" is a symptom, not a disease.[5] Today a consensus has not been achieved on the precise definition of vertigo. Many otologists would recognize vertigo as distinct from other forms of dizziness such as presyncopal lightheadedness, disequilibrium, or other unsettling sensations.[6] Dizziness is accompanied by circumscribed illusions of motion of oneself or the surroundings, that is a symptom combination seized by the term vertigo.[7] Vertigo complaint may occur in many central or vestibular disorders. Epidemiological surveys showed that 20% to 30% of the population may have experienced vertigo or dizziness in their lifetime.[8-11]

The diagnosis and management of vertigo begins with understanding the patient. In many cases, an underlying vestibular or non-vestibular organic dysfunction cannot be determined with certainty. Vertigo and dizziness are also frequently associated with other common systemic diseases and conditions, and anxiety.[12,13] Psychological factors such as anxiety and depressive disorders, which are known to exist in at least one-third of tertiary care otoneurology patients, may affect clinical presentations and therapeutic outcomes.[12] Health anxiety has not been investigated previously in patients with vertigo complaint. The purpose of this study was to investigate the possible relations between health anxiety and vertigo.

Materials and Methods

This was a questionnaire study. The study group consisted of 62 patients (42 female; 67.7% and 20 male; 32.3%) who got admitted to the otolaryngology clinic with vertigo complaint. In the control group, there were 70 (42 female; 60% and 28 male; 40%) otherwise healthy subjects. The age range was 18 - 69 (mean age 37.9) and 22- 47 (mean age 34.4) in study and control groups, respectively. The participants were given information about the study according to Helsinki Declaration. Approval of the institutional ethics committee was obtained from "Bozok University Medical School Ethics Committee on Non-Interventional Clinical

Investigations".

Patients with a chronic illness (diabetes mellitus, hypertension, etc.) and/or under treatment with any psychiatric medication were excluded from the study group. The control group was selected from subjects who had no known history of chronic illness, current or past psychiatric disorder. The study period was between February 2014 and April 2014. The demographic data including age, sex, education and marital status were recorded for all participants. The following two questionnaires were used to evaluate the anxiety levels of study participants.

Short Health Anxiety Inventory (SHAI) scale in Turkish: Health Anxiety Inventory is a self-reporting scale developed by Salkovskis et al.[14] It is sensitive for normal level of health and severe health anxiety. The scale includes 18 items. Each item consists of four statements. Participant selects one statement that mostly reflects his or her feelings over the past six months. Each item utilizes a scale between 0 and 3. The scores range from 0-54. Higher scores represent increased severity of health anxiety. Validity and safety of the test was assessed by Aydemir et al. for Turkish population.[15]

Beck Anxiety Inventory (BAI): The test consists of 21 item self-report questionnaire, which is used to measure the degree and severity of the anxiety in a sample of patients. The inventory was developed by Beck et al.[16] Each item utilizes a scale between 0 and 3. Participant selects one statement that reflect his or her feelings over the past one week. 0 being ''not present'' and 3 being ''severely''. The scores range from 0 to 63. Higher scores mean increased severity of anxiety experiences. Ulusoy et al adapted the test for the Turkish population.[17]

In order to analyze the relationship between vertigo and health anxiety, we applied BAI and SHAI in Turkish to all participants.

Statistical Analysis: The analyses were carried out using SPSS version 17 (SPSS Inc, Chicago, IL, USA). Due to age factor, Beck anxiety inventory and health anxiety scores weren't distributed normally and homogenously. Therefore, non-parametric tests were used for the analyses. Differences between the groups concerning age, health anxiety scores and Beck anxiety inventory results were analyzed by using Mann-Whitney U test. Correlations between continuous variables were tested by the Spearman's correlation coefficient. In the study, p value of <0.05 were assumed to represent statistical significance.

Results

The demographic data including age, sex, education and marital status of participants were shown in Table-1.

Table-1: Demographic properties of the participants

Characteristics		Study Group (n=62)	Control Group (n=70)
Age (years)		37.96 ± 11.59	34.47 ± 5.87
Gender	Female (%)	42 (67.7%)	42 (60%)
	Male (%)	20 (32.3%)	28 (40%)
Marital status	Married (%)	48 (77.4%)	60 (85.7%)
	Single (%)	14 (22.6%)	10 (14.3%)
Educational Status	Primary School (%)	15 (24.2%)	22 (31.4%)
	High School (%)	25 (40.3%)	16 (22.9%)
	University (%)	22 (35.5%)	32(45.7%)

Table-2: Results of SHAI and BAI in patients and control group

Scores	Study Group (n=62)	Control Group (n=70)	Statistics
Health Anxiety Inventory (Short Revision) Scores (Mean ± SD)	19.59 ± 7.98	9.97 ± 4.61	P<0.001 Z =-7.18
Beck Anxiety Inventory Scores (Mean ± SD)	21.82 ± 9.80	9.20 ± 5.46	P<0.001 Z= -7.25

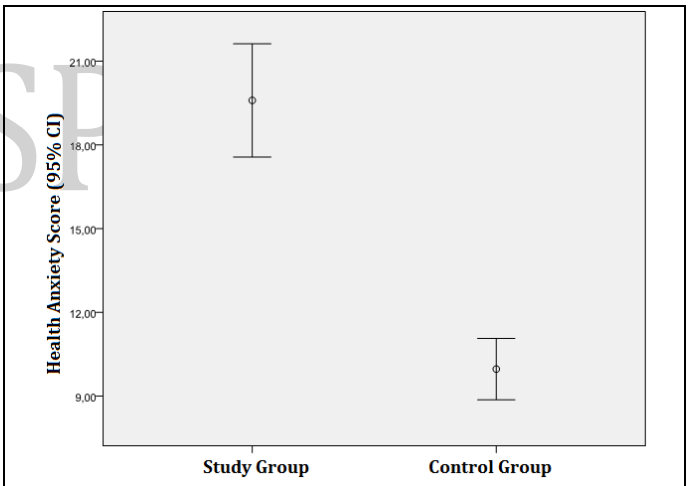

Figure-1: Relationship between HAI scores and groups

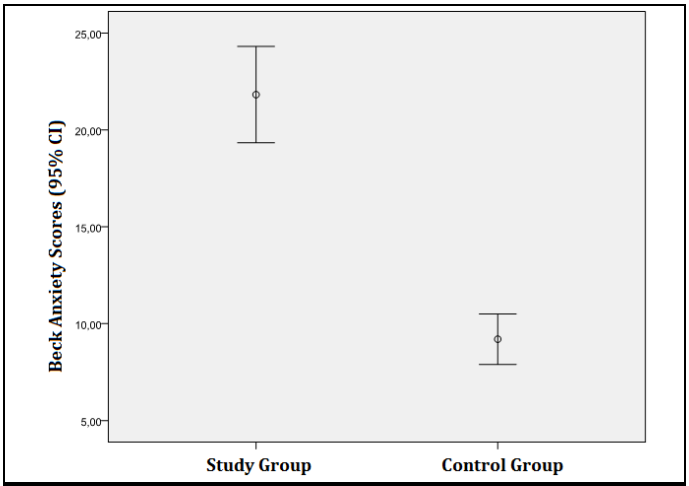

Figure-2: Relationship between BAI scores and groups

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With regard to the SHAI and BAI scores, the test results reached statistical significance between the study and control groups ($p<0.001$ for both groups, Table-2). The relationship between SHAI scores and the groups were shown in figure-1. Also BAI scores in patients and control group were shown in figure-2. With regard to gender and marital status, SHAI and BAI results did not reach significant difference ($p>0.05$). With regard to age, there was no statistical significance between the study and control group ($p>0.05$).

Discussion

In this study, we investigated the relationship between health anxiety level and vertigo complaints. Vertigo may be experienced by patients in several health conditions, and it may not be possible to find the exact cause of vertigo in every case. Psychological factors are known to exist in at least one-third of tertiary care otoneurology patients, and may affect clinical presentations and therapeutic outcomes.[12]

Whether or not the exact reason that caused vertigo complaint has been confirmed, especially in those who have experienced vertigo for prolonged periods, psychologic factors should be expected to accompany the clinical picture.[12] There have been numerous investigations of anxiety and depression in patients with otoneurologic disorders[18-23] but health anxiety has not been studied in patients with vestibular complaints.[24] Actually, several features of otoneurologic diseases may be particularly troublesome for patients who are prone to health anxiety.[24] Honaker et al reported a patient who had benign paroxysmal positional vertigo, vestibular migraine and chronic subjective dizziness with severe health anxiety.[24] They claimed that health anxiety may cause negative impact on the treatment. They concluded that health anxiety magnifies physical symptoms, inhibits medical care, and interferes with the effectiveness of therapeutic relationship between patients and clinicians, if left unrecognized.[24] In parallel to these literature findings, we found that there was statistically significant difference between SHAI and BAI scores of the study and control groups. ($p<0.001$)

With regard to gender and marital status, SHAI and BAI results did not reach significant difference ($p>0.05$). This may be due to the relatively small sample size of the groups or lower educational attainment in female patients that eventually leads to lack of sufficient cooperation to the given questionnaires. According to other studies[25,26], there was a higher psychological distress in women than in men. This may be associated with the prevalence of certain characteristics (psychological anxiety and depression distress) that is higher in women than in the general population.[27,28] Another explanation for this difference between genders might be that women suffer greater psychological impact from vertigo than men.[29] Females also tend to suffer from hypochondriasis and other somatoform disorders more frequently than males, and the relationship between these conditions and socio-demographic factors, such as education, income, and ethnicity, has been mixed.[30] However, high educational attainment, being employed, being married, and having a stable income may be protective against health anxiety disorders.[31]

Limitation of the Study

The major limitation of this study is the relatively low sample size of the groups. Nevertheless, we were able to gather data volume that was sufficient to obtain meaningful results for statistical analysis. Another limitation of the study is the lack of the discrimination between vertigo, dizziness and unsteadiness as we used the patients' self-descriptions to define their condition.

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Conclusion

Health anxiety and vertigo are common problems that may easily be neglected by busy general practitioners. Our results suggest that, if left unrecognized for prolonged periods, these clinical pictures may have negative impact on various psychological parameters, which eventually lead to socioeconomic consequences. Otolaryngologists and psychiatrists should be in closer cooperation to diagnose and to treat these health problems.

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