NORTHWESTERN MEDICAL JOURNAL

Northwestern Med J. 2026;6(1):349-358
DOI: 10.54307/NWMJ.2026.228

RESEARCH ARTICLES

Sexual dysfunction in vertigo patients: a clinical assessment using Arizona Sexual Experiences Scale

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Cite as: Toprak SF, Dedeoğlu S, Dönmezdil S, Sırma E. Sexual dysfunction in vertigo patients: a clinical assessment using Arizona Sexual Experiences Scale. Northwestern Med J. 2026;6(1):349-358.

ABSTRACT

Objective: Vertigo represents a chronic and disabling disorder that is often associated with anxiety, depressive symptoms, sleep disturbances, and prolonged medication use, factors that may collectively contribute to impaired sexual function. Sexual health is rarely addressed in vestibular clinics. We aimed to quantify sexual dysfunction in adults with chronic vertigo using the Arizona Sexual Experiences Scale (ASEX) and to compare outcomes with healthy controls.

Methods: We performed a prospective case–control study of 30 consecutive outpatients with chronic vertigo (mean age 37.8 years; 57% female) and 30 age- and sex-matched volunteers. Participants completed the ASEX, Dizziness Handicap Inventory (DHI), Patient Health Questionnaire-9 (PHQ-9), Generalised Anxiety Disorder-7 (GAD-7), and Pittsburgh Sleep Quality Index (PSQI). Between-group differences in ASEX total and item scores were analysed with t-tests or Mann–Whitney U tests. Sexual dysfunction was defined as ASEX ≥19. Multivariable logistic regression tested whether vertigo status predicted sexual dysfunction after adjustment for depressive symptoms and sleep quality.

Results: Vertigo patients showed significantly worse global sexual function than controls (ASEX total 16.9±5.1 vs 11.8±3.7; $p<0.001$). Clinical sexual dysfunction occurred in 43% of patients and 13% of controls ($p=0.007$). The five domains of ASEX: drive, arousal, lubrication/erection, ability to reach orgasm and satisfaction were significantly worse in the group with vertigo (all $p\leq0.005$). Patients had higher PHQ-9and GAD-7 scores (both $p<0.001$). Vertigo was an independent predictor of sexual dysfunction (adjusted odds ratio ≈ 4.0; $p<0.01$).

Conclusion: Adults with chronic vertigo suffer from a significantly increased burden of SD. The ASEX is a usefulscreening instrument. Health care professionals should seek information about sexual health and modifiablecontributors such as mood, sleep, and medications.

Keywords: Arizona Sexual Experience Scale, dizziness, sexual dysfunction, quality of life, vertigo

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Received: 30.10.2025 **Accepted:** 13.01.2026 **Published:** 31.01.2026

INTRODUCTION

Vertigo, the false sense of movement within stable surroundings, is a common and disabling disorder that severely compromises quality of life. Patients with chronic vertigo often develop anxiety and depression, and accordingly, they are frequentlytreated with vestibular suppressants or antidepressants. Emotional stress and drug side effects are known contributingfactors for sexual dysfunction (1). Sexual dysfunction, defined as difficulty in any stage of the sexual response cycle, is widespread among healthy individuals, affecting approximately 40% of women and30% men reporting one or more sexual problems. It is much higher incases with other chronic medical conditions. Large-scale surveys and meta-analyses have shown that chronic diseases, such as diabetes, hypertension, and depression, increase the likelihood of having SD by2–6 fold when compared to age-matched normal men (2). Clinicians frequently neglect sexual health in non-sexual fields.

Vestibular illnesses exhibit increasing evidence of widespread comorbidity with mood and cognitive alterations that may impact intimacy. Zapata and López-Escámez (2011) examined 48 individuals with Menière's illness, a chronic vestibular ailment. They discovered that men exhibited twice the national rate of erectile dysfunction, whereas women reported markedly diminished sexual satisfaction and increased dyspareunia. In both genders, these sexual issues were significantly associated with diminished emotional well-being (3). A link between tinnitus, another inner-ear ailment, and erectile dysfunction has been documented (4). Moreover, numerous people with vertigo experience secondary psychological disorders, with 50–60% of individuals suffering from persistent vestibular issues reporting clinically significant anxiety or sadness (5). Anxiety and depression themselves are well-known causes of sexual dysfunction (e.g., up to 75% of women with severe depression fulfil ASEX criteria for sexual dysfunction (6). Sleep disturbance, frequent in chronic disease, also predicts erectile dysfunction (7).

These findings imply a biopsychosocial model: chronic vertigo imposes physical constraints (e.g., activity avoidance, weariness) and emotional loads that presumably impair libido and arousal. Many vertigo drugs (antihistamines, benzodiazepines, SSRIs) have sedating or serotonergic side effects that diminish sexual response. Indeed, vestibular suppressants (e.g., meclizine, diazepam) can cause sleepiness and, in consequence, diminished sexual drive, whereas SSRIs are connected with anorgasmia and erectile difficulties. Thus, the impact of vertigo on sexual function is likely complex.

Arizona Sexual Experience Scale (ASEX). To study sexual function in this context, we employed the 5-item ASEX questionnaire. ASEX quantifies essential domains: drive, arousal, penile erection/vaginal lubrication, ability to reach orgasm, and satisfaction from orgasm. Each item is graded on a scale of 1 (ideal) to 6 (worst), generating a total score of 5–30. Higher scores suggest more dysfunction. A total ≥19 or any item ≥5 is usually used as a criterion for clinically severe impairment. The ASEX has demonstrated excellent reliability and validity across various patient groups. For example, Elnazer and Baldwin's structured review indicated that ASEX had strong internal consistency (Cronbach's α ~0.9) and reliably distinguished between patients and controls (1). It is also gender-neutral in design, making it practical for mixed cohorts (2). However, ASEX has not been previously applied to patients with vertigo.

Study aims and hypotheses. We thus conducted a prospective case–control research to examine sexual function in vertigo patients. Our primary aim was to compare overall ASEX scores between patients with chronic vertigo and healthy controls. We expected that vertigo patients would have considerably higher (worse) ASEX ratings and a higher prevalence of ASEX-defined sexual dysfunction than controls, indicating the burden of sickness and its psychosocial repercussions. Secondary aims were to study specific ASEX dimensions and to explore correlates of sexual dysfunction (demographics, diagnosis, concomitant anxiety/depression, sleep quality). We also investigated the viability of ASEX in an ENT clinical context. Subgroup analyses by gender and by usage of vestibular medicines were planned.

MATERIALS AND METHODS

This case-control study was approved by the Ethics Committee of Gazi Yaşargil Education and Research Hospital (Approval No: 459) and conducted in accordance with the Declaration of Helsinki. We selected 30 adults (18–55 years old) from our university hospital's outpatient otology/vestibular clinic who had a clinical diagnosis of chronic vertigo. For this study, chronic vertigo was operationally defined as persistent or recurrent vestibular symptoms for at least 3 months, consistent with commonly used definitions of chronic vestibular symptomatology. This definition encompassed both disorders characterised by continuous symptoms (e.g., persistent postural–perceptual dizziness) and episodic vestibular disorders with a chronic course (e.g., vestibular migraine, Ménière's disease, or recurrent benign paroxysmal positional vertigo), provided that patients experienced ongoing functional impairment, symptom-related anxiety, or activity restriction beyond acute attacks. Although several of the vestibular disorders evaluated in this study are characteristically episodic, patient inclusion was restricted to individuals whose condition resulted in a sustained impact on daily functioning.

Disorders such as vestibular migraine, Ménière's disease, and recurrent benign paroxysmal positional vertigo were therefore considered eligible only when vestibular symptoms were recurrent or persistent for a minimum duration of three months. They were associated with ongoing functional or psychological consequences. These consequences included residual balance disturbances between attacks, anticipatory anxiety related to symptom recurrence, activity avoidance, and long-term limitations in everyday life. Accordingly, patient recruitment was based not on isolated acute vertigo episodes but on the presence of a clinically meaningful chronic vestibular disease burden, regardless of attack periodicity.

All patients were evaluated by an experienced otologist using a standardised diagnostic approach. Diagnoses were established in accordance with internationally recognised criteria, supported by detailed clinical assessments and, when indicated, vestibular function testing. Vestibular migraine was diagnosed according to the diagnostic criteria of the International Headache Society (IHS). In contrast, Ménière's disease was diagnosed according to established clinical guidelines, particularly those of the American Academy of Otolaryngology–Head and Neck Surgery (AAO-HNS). Persistent postural–perceptual dizziness (PPPD) was diagnosed in accordance with the 2017 Bárány Society criteria, which require persistent non-spinning dizziness or unsteadiness for at least 3 months, exacerbated by upright posture, active or passive motion, or exposure to complex visual stimuli.

All patients underwent a comprehensive neurotologic examination, including bedside head impulse testing. When clinically warranted, vestibular function was further assessed using objective measures such as caloric testing, cervical and ocular vestibular-evoked myogenic potentials (cVEMP and oVEMP), and pure-tone audiometry. These investigations were performed to support the clinical diagnosis and to characterise vestibular system function. Notably, bilateral vestibulopathy was systematically excluded by both clinical evaluation and vestibular testing, as none of the patients demonstrated evidence of bilateral vestibular hypofunction, including diminished vestibulo-ocular reflex responses on head-impulse or caloric testing. This integrated diagnostic approach enabled reliable differentiation among overlapping chronic vestibular syndromes.

Key exclusion criteria included the use of medications known to substantially reduce sexual desire, such as specific antipsychotic agents or high-dose selective serotonin reuptake inhibitors; uncontrolled metabolic or endocrine disorders, including diabetes mellitus or hormonal abnormalities; identifiable neurological conditions with an independent impact on sexual function, such as multiple sclerosis; and the presence of major psychiatric disorders requiring ongoing pharmacological treatment known to affect sexual function (e.g., severe depressive disorders treated with potent antidepressants or schizophrenia). Individuals already diagnosed with primary mental health conditions that could significantly change sexual function, like major depression being treated, intense anxiety, psychosis, or somatoform issues, were not included. A complete mental health diagnosis was not done for everyone; instead, we used the Patient Health Questionnaire-9 (PHQ-9) and the Generalised Anxiety

Disorder-7 (GAD-7) to check how bad their depression and anxiety were. We used these tools to see how many symptoms people had at that moment, but not to make any official diagnoses. Patients with bilateral vestibulopathy were excluded a priori. Bilateral vestibular failure is characterised by persistent oscillopsia, severe gait instability, and continuous postural imbalance, which may influence sexual activity predominantly through profound physical limitations rather than through mechanisms related to episodic vertigo or vestibular symptom–related anxiety. Inclusion of such patients could therefore introduce a qualitatively distinct pathophysiological subgroup and confound interpretation of sexual function outcomes. Importantly, no patient in the screened population met diagnostic criteria for bilateral vestibulopathy; thus, this exclusion criterion did not alter the final study sample but was implemented as a predefined methodological safeguard.

A comparative group of 30 healthy volunteers (mean age, 36.5 years; 60% female) was recruited through community advertisements. Controls were age- and sex-matched, and screened to have no history of chronic vertigo, no significant neurological or psychiatric condition, and not using drugs with recognised sexual side effects. Mild common conditions (e.g., hypertension with ACE medications) were allowed. All participants provided informed consent.

Demographics and clinical variables: We collected age, sex, relationship status (married/cohabiting vs. not), and body mass index (BMI). In vertigo patients, we noted the diagnosis, symptom duration (in years), and current medications (including vestibular suppressants, SSRIs, etc.).

The patient and control groups were intentionally matched for sex distribution in order to minimise sex-related confounding. The proportion of female participants was comparable between groups (patients: 57%, 17/30; controls: 60%, 18/30), with no statistically significant difference in sex distribution.

Dizziness Impairment Inventory (DHI): Patients with vertigo completed the 25-item DHI to quantify their reported vestibular impairment. The DHI is commonly used in patients with dizziness to assess the impact of vertigo on daily activities (8,9). It produces a total score (0–100) with subscales for functional, emotional, and physical effects. Higher DHI indicates higher impairment. (The DHI has shown good reliability) (9). Controls were not administered the DHI.

Arizona Sexual Experiences Scale (ASEX): ASEX consists of 5 Likert-scaled items (see Introduction). Total scores range from 5 to 30, with higher scores implying worse function. We applied ASEX consistently to both patients and controls. We utilised established cutoff criteria (total ≥19 or any item ≥5) to diagnose "clinically significant sexual dysfunction (10). ASEX was administered in private by a physician during a face-to-face interview.

Mental health and sleep questionnaires: All participants completed the Patient Health Questionnaire-9 (PHQ-9) for depression (11), the Generalised Anxiety Disorder 7-item scale (GAD-7) (12), and the Pittsburgh Sleep Quality Index (PSQI) (10). The PHQ-9 and GAD-7 are brief, validated measures for depression and anxiety severity (11,12). The PSQI assesses subjective sleep quality (global score 0–21; >5 indicates poor sleep) (10). These tools permitted assessment of mood and sleep status, which are potential correlates of sexual function.

We summarised continuous data as mean ± SD (or median and IQR if skewed) and categorical variables as counts (%). Group comparisons (vertigo vs. control) used two-sample t-tests or Mann–Whitney U tests for continuous data and chi-square or Fisher's exact tests for categorical data. ASEX overall and domain scores were compared by t-test/Mann–Whitney as applicable. We also provide the proportion meeting the ASEX dysfunction criterion and evaluate this with a chi-square test.

To adjust for potential confounders, we ran multivariable logistic regression with sexual dysfunction (ASEX ≥ 19) as the outcome, including group (vertigo versus control), age, gender, and significant covariates (e.g., PHQ-9, GAD-7) as predictors. Adjusted odds ratios (aOR) with 95% confidence intervals were computed. Finally, subgroup analyses stratified by sex and by use

of vestibular medications were undertaken to evaluate the robustness of the findings. Statistical tests were two-tailed with α=0.05. Analyses were conducted in SPSS v.25 (IBM Corp., Armonk, NY).

RESULTS

Participant characteristics are reported in Table 1. Vertigo patients (n = 30) and controls (n = 30) were well-matched for age (37.8 ± 10.2 vs. 36.5 ± 11.0 years, p = 0.62) and sex (57% vs. 60% female, p = 0.79). Most were in a long-term relationship (87% vs. 83%, p = 0.74). In the vertigo group, the median symptom duration was 1.8 years (inter-quartile range, IQR, 1.0–3.5 years). The most prevalent diagnoses were vestibular migraine (40%), Menière's disease (30%), and PPPD/other (30%). Twenty patients (67%) were taking at least one vestibular suppressor or anxiolytic drug; none of the controls were on such meds.

Compared to controls, vertigo patients had significantly higher mean scores on the PHQ-9 (8.2±2.9 vs 3.1±1.1, p<0.001) and GAD-7 (7.5±3.0 vs 2.4±1.2, p<0.001), indicating more depressive and anxiety symptoms in the patient group. Sleep quality was also worse in patients (PSQI 8.5±2.5 vs. 4.9±1.3, p < 0.001). The mean DHI score in patients was 52.0±14.8, reflecting moderate handicap. These additional results (not shown in tables) confirm that vertigo patients had greater psychiatric distress and worse perceived dizziness than controls.

Sexual function data are summarised in Table 2. Vertigo sufferers got significantly worse ASEX ratings. The mean total ASEX score was 16.9±5.1 in the sick

Table 1. Demographics and baseline characteristics of vertigo patients versus controls

Characteristic	Vertigo (n=30)	Control (n=30)	p-value
Age, mean ± SD (years)	37.8 ± 10.2	36.5 ± 11.0	0.62
Female, n (%)	17 (56.7%)	18 (60.0%)	0.79
In relationship (yes), n (%)	26 (86.7%)	25 (83.3%)	0.74
Body Mass Index, mean ± SD	25.9 ± 3.4	25.1 ± 3.1	0.45
Symptom duration, median (IQR)	1.8 (1.0–3.5) years	–	–
Vestibular suppressants, n (%)	20 (66.7%)	0 (0%)	<0.001
PHQ-9 score, mean ± SD	8.2 ± 2.9	3.1 ± 1.1	<0.001
GAD-7 score, mean ± SD	7.5 ± 3.0	2.4 ± 1.2	<0.001
PSQI (sleep) score, mean ± SD	8.5 ± 2.5	4.9 ± 1.3	<0.001

PHQ-9: Patient Health Questionnaire-9; GAD-7: Generalized Anxiety Disorder 7; PSQI: Pittsburgh Sleep Quality Index (PSQI).

Table 2. ASEX scores in vertigo patients and controls

ASEX Outcome	Vertigo (n=30)	Control (n=30)	p-value
Total ASEX score, mean ± SD	16.9 ± 5.1	11.8 ± 3.7	<0.001
ASEX score, median (IQR)	17.0 (13.0–21.0)	12.0 (9.0–14.0)	<0.001
Sex drive, mean ± SD	3.8 ± 1.1	2.5 ± 0.8	0.002
Arousal, mean ± SD	3.6 ± 1.2	2.4 ± 0.9	<0.001
Erection/Lubrication, mean ± SD	3.3 ± 1.1	2.2 ± 0.7	0.005
Orgasm ability, mean ± SD	3.7 ± 1.3	2.3 ± 0.8	<0.001
Orgasm satisfaction, mean ± SD	3.5 ± 1.2	2.0 ± 0.7	<0.001
ASEX dysfunction (n, %)	13 (43.3%)	4 (13.3%)	0.007

ASEX: Arizona Sexual Experiences Scale.

group, compared to 11.8±3.7 in the controls (t-test, p<0.001). The median ASEX score was considerably higher in patients (17.0 (IQR 13–21) vs 12.0 (9–14), p<0.001). By domain, vertigo patients scored lower than controls on all five ASEX measures (all p≤0.005): sex drive, arousal, penile erection/vaginal lubrication, orgasm ability, and orgasm satisfaction. For example, average arousal levels were 3.6 vs. 2.4 (out of 6) in patients compared to controls (p < 0.001). As shown in Figure 1 and Figure 2, the distributions differ significantly between groups.

Clinically severe dysfunction (ASEX≥19 or any item ≥5) was found in 13 of 30 vertigo patients (43.3%) compared to 4 of 30 controls (13.3%, χ^2=7.40, p = 0.007). In other words, vertigo patients were over three times as likely to screen positive for sexual dysfunction. Logistic regression supported this finding: after adjusting for age, sex, PHQ-9, and GAD-7 scores, the adjusted odds ratio for dysfunction in vertigo versus control was ~4.0 (95% CI, 1.4–11.5, p = 0.008). Sleep quality (PSQI) was associated with ASEX in univariate analysis (greater PSQI scores were associated with dysfunction, p = 0.02), but this association did not remain significant in the multivariable model.

By gender: When stratified, both men and women showed the same pattern. Among the 17 female vertigo patients, the average ASEX total was 17.2 (SD 4.9) vs 2/18 (11.1±3.5) in female controls (p=0.001). Among males, patients averaged 16.4±5.3 years, compared to 12.6±3.8 years in male controls (p=0.009). The prevalence of dysfunction (ASEX ≥ 19) was 41% in female patients and 46% in male patients, compared with 11% and 17% in female and male controls, respectively (differences not statistically significant by gender subgroup due to small sample sizes). There was no significant interaction by gender – vertigo status predicted dysfunction similarly in men and women.

To explore potential sex-related effects, sexual dysfunction prevalence was additionally analysed separately for female and male participants. Among women, 39% (7/18) of vertigo patients met criteria for sexual dysfunction compared with 11% (2/18) of female controls. Among men, sexual dysfunction was present in 42% (5/12) of male vertigo patients versus 8% (1/12) of male controls. The study, while not designed to find sex-specific differences, found higher rates of sexual dysfunction in vertigo patients of both sexes when compared to controls of the same sex.

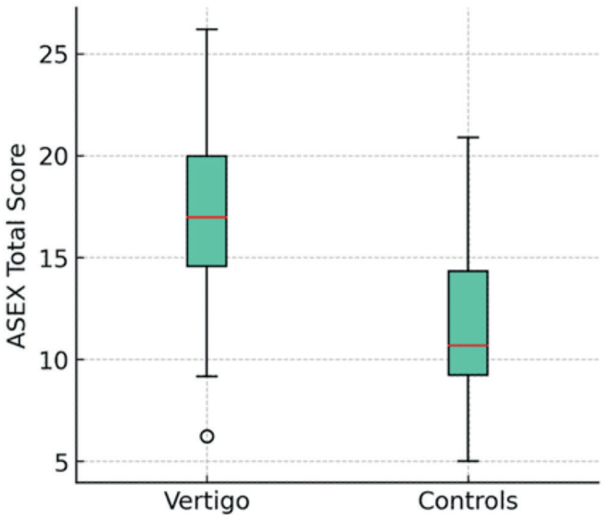

Figure 1. Distribution of total ASEX scores. Boxplots of total ASEX score in vertigo patients (left) and healthy controls (right). The vertigo group shows significantly higher ASEX scores (worse sexual function) than controls. Median values (horizontal lines) and interquartile ranges are indicated.

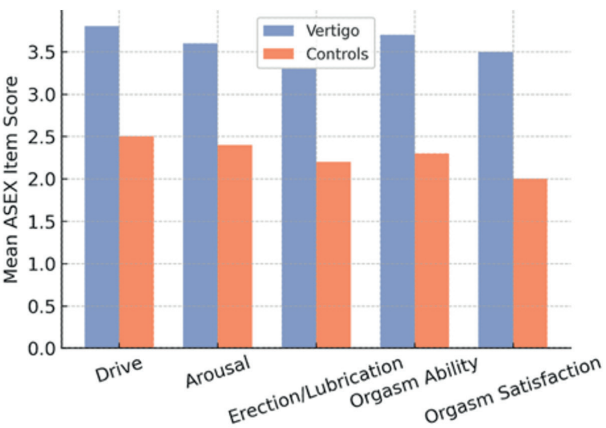

Figure 2. ASEX domain scores by group. Bar chart of mean scores (±SE) for each ASEX domain in vertigo patients (dark bars) versus controls (light bars). Higher scores indicate worse function. All five domains are significantly higher (worse) in the vertigo group (p<0.01 by t-test).

Table 3. Multivariable logistic regression for sexual dysfunction (ASEX≥19). Adjusted for age, sex, PHQ-9 and GAD-7

Predictor	Adjusted OR (95% CI)	p-value
Vertigo patient (yes)	4.20 (1.44 – 12.2)	0.008
PHQ-9 (per point)	1.15 (0.99 – 1.34)	0.056
GAD-7 (per point)	1.08 (0.94 – 1.25)	0.28
Age (per year)	0.97 (0.91 – 1.04)	0.40
Female sex (M=0, F=1)	1.02 (0.30 – 3.42)	0.98

PHQ-9: Patient Health Questionnaire-9; GAD-7: Generalized Anxiety Disorder 7.

Looking at diagnosis and medication within the vertigo group, ASEX scores did not differ much across vestibular diagnoses (e.g., Menière's, vestibular migraine, or PPPD), even though the numbers in each group were small. Patients on daily vestibular suppressants (n = 20) exhibited somewhat higher mean ASEX scores (17.5 vs. 15.2) and a higher dysfunction rate (50% vs. 29%), although these differences were not statistically significant (p = 0.18). Excluding patients on SSRIs or benzodiazepines (n=8) did not dramatically impact results — the vertigo group still exhibited a 3.5-point higher ASEX mean than controls. Thus, medication use did not fully explain the group difference.

Correlations: In the vertigo group, total ASEX score linked modestly with DHI total (r≈0.45, p=0.01) and with PHQ-9 (r≈0.43, p=0.02) and GAD-7 (r≈0.41, p=0.03). These relationships persisted after correcting for age and sex. This shows that severe dizziness handicap and higher mood symptoms were associated with lower sexual function. However, in the logistic model, only vertigo status remained a strong independent predictor (see Table 3).

Regression model: We conducted a multivariable logistic regression with sexual dysfunction (ASEX≥19) as the outcome (Table 3). After controlling for age and sex, vertigo status was very significant (adjusted OR 4.2; 95% CI 1.44–12.2; p=0.008). Depression score (PHQ-9) exhibited a borderline influence (aOR 1.15 per point; p=0.056), and anxiety (GAD-7) was not significant. Sleep quality (as measured by the PSQI) was not significant after correction. These data reveal that, despite accounting for psychological considerations, vertigo patients had considerably higher probabilities of sexual dysfunction than controls.

DISCUSSION

In this study, patients with persistent vertigo reported considerably lower sexual performance than healthy volunteers. Patients with vertigo exhibited significantly higher ASEX total scores and a substantially higher rate of ASEX-defined impairment (43% vs 13%). All areas measured by the ASEX were impacted, with arousal and orgasm showing the most change. Our results support the idea that the difficulties caused by vertigo can lead to sexual problems. This study is, to the best of our knowledge, the first to systematically examine sexual function in people with vestibular disorders. These results parallel findings in other chronic illness groups. For instance, in an extensive US study, Wu et al. (2022) found that psychological variables (depression and poor sleep) strongly predicted erectile dysfunction (7). In our population, patients exhibited higher PHQ-9 and PSQI scores, consistent with these observations. Similarly, Liu et al. (2023) observed that women with severe depression had considerably higher ASEX scores than men (6). In our study, both sexes in the vertigo group exhibited higher ASEX scores, without a significant gender difference, and mood aspects appeared to contribute. In inflammatory disorders, Yan et al. (2024) recently reported that men with osteoarthritis or rheumatoid arthritis had a markedly higher incidence of ED compared to the general population (2). Our observation of higher ASEX dysfunction in vertigo patients shows that vestibular diseases should be recognised among systemic illnesses where sexual health is affected.

Potential reasons explaining our findings include both psychological and physiological routes. Vertigo typically leads to anticipatory worry and avoidance behaviour; some patients fear generating dizziness by exertion or particular motions, which may extend to sexual engagement. Emotional anxiety from unpredictable vertigo attacks might reduce libido and

orgasmic function. The literature corroborates this: distress and mental health issues are consistently associated with sexual function in patient groups (1-3). Our findings indicated a moderate connection between ASEX scores and both depression and anxiety scales, suggesting mood symptoms partly explain the link.

Many vertigo sufferers take sedating medicines or SSRIs for comorbid anxiety. Although our subgroup analysis did not uncover a significant impact of medication on ASEX (perhaps because of the restricted sample size), we note that vestibular sedatives and serotonergic antidepressants can decrease sexual drive and orgasm. For example, SSRIs are well-known to produce erectile and orgasmic issues. Thus, some of the observed dysfunction may be iatrogenic.

Another consideration is the vestibular-autonomic connection. Vertigo and imbalance can trigger the autonomic nervous system, potentially altering genital blood flow or arousal. However, this link is not widely investigated. The DHI-association findings (worse ASEX with higher DHI) imply that more severe dizziness may be directly linked to sexual issues. Dizziness handicaps have been demonstrated to connect with autonomic and emotional dysregulation, which could indirectly influence sexual function (8).

Our findings have practical value. Sexual health is a crucial component of overall well-being; however, it is rarely assessed during ENT or neurology consultations. Many chronically sick people prefer more talk of sexuality with their caregivers. Vertigo sufferers may not reveal sexual difficulties unless asked, due to shame or the belief that it is irrelevant. The ASEX is quick and easy to use. Our work indicates that it is a good way to detect problems in dizzy patients. Doctors should ask dizzy patients about their sexual function, especially if patients seem anxious or sad, or say that their lives are restricted. Spotting problems can mean patients get advice, changes to their drugs, or treatments that could really improve their lives. For example, PDE5 inhibitors can be given to men.

The limits of our study should be considered. This study has several limitations that should be considered when interpreting the findings. First, the relatively small sample size and single-centre design may limit the generalizability of the results to broader populations. In addition, the study cohort included patients with heterogeneous vestibular diagnoses, reflecting real-world clinical practice; however, different vertigo etiologies may influence sexual function through distinct mechanisms. Factors such as partner status and menopause in female participants, which are known to affect sexual function, were not systematically evaluated and may therefore represent unmeasured confounders.

Furthermore, given the observational nature of the study, causal relationships between vertigo and sexual dysfunction cannot be established. Another limitation relates to diagnostic grouping. The chronic vertigo group comprised patients with various underlying vestibular disorders. Although all participants met predefined criteria for symptom chronicity and functional impairment, the diagnostic heterogeneity within this group may have introduced variability and potentially obscured disorder-specific effects on sexual function. Consequently, the present findings likely reflect the overall burden of chronic vertigo rather than the impact of any single vestibular disorder. Future studies with larger sample sizes should aim to include more homogeneous diagnostic groups or perform robust subgroup analyses to delineate better the relationship between specific vertigo etiologies and sexual dysfunction.

Excluding patients with bilateral vestibulopathy is an additional limitation of this study. Although bilateral vestibulopathy constitutes a prototypical form of chronic vestibular dysfunction, its characteristic symptoms—such as persistent imbalance and oscillopsia—may influence sexual function through mechanisms that differ from those observed in episodic or fluctuating vestibular disorders. Consequently, the present findings may not be directly generalizable to individuals with bilateral vestibulopathy. Further research is warranted to determine whether the prevalence, severity, and underlying mechanisms of sexual dysfunction in this population differ from those observed in other chronic vestibular conditions.

Moreover, the study cohort comprised patients with a range of vestibular disorders, including both persistent and episodic conditions, who experienced

long-standing symptoms with a sustained impact on daily functioning. While this approach reflects real-world clinical practice, the heterogeneity of diagnoses may have limited the ability to detect disorder-specific effects on sexual function. As a result, the findings likely represent the overall burden of chronic vestibular dysfunction rather than the influence of individual etiologies. Accordingly, this study should be regarded as exploratory. Future investigations with larger sample sizes should prioritise homogeneous diagnostic cohorts—such as patients with persistent postural–perceptual dizziness or bilateral vestibular hypofunction—or perform disorder-specific subgroup analyses to characterise the relationship between vestibular pathology and sexual function more precisely.

An additional limitation of this study is the absence of a comprehensive psychiatric evaluation. Although individuals with known psychiatric diagnoses were excluded and depressive and anxiety symptoms were screened using the PHQ-9 and GAD-7, these self-report instruments do not replace formal psychiatric assessment. Undiagnosed or subclinical mood and anxiety disorders may therefore have been present and could have contributed to the observed sexual dysfunction, partly confounding the association between chronic vertigo and sexual outcomes. Furthermore, despite matching patients and controls by sex, female-specific factors known to influence sexual function—such as menopausal status, hormonal abnormalities, use of hormonal contraception, and gynaecological conditions—were not systematically assessed. As a result, the potential impact of these sex-specific confounders cannot be excluded, and they may have contributed to variability in sexual function measures. Future studies should incorporate structured psychiatric evaluations and detailed assessment of sex-specific clinical factors to clarify these relationships better.

Future studies should seek to replicate and extend these findings in larger, multicenter cohorts. Such studies may benefit from stratifying participants by specific vertigo diagnoses and incorporating objective measures, including hormonal assessments and partner-reported outcomes. Longitudinal designs could help determine whether improvements in vertigo symptoms or associated anxiety and depression lead to meaningful changes in sexual function. In addition, qualitative research may provide valuable insights into patients' perceptions of how vertigo affects intimacy and interpersonal relationships. Given the high prevalence of sexual dysfunction observed, interventional trials integrating vestibular rehabilitation with targeted sexual or psychosocial counselling may also be warranted.

CONCLUSIONS

Sexual dysfunction is a frequently ignored condition in vertigo patients. Our ASEX-based assessment found that individuals with persistent vestibular illnesses have considerably lower sexual performance than healthy controls, even after accounting for mood symptoms. These findings underline the need for routine sexual health screening in vertigo care. By including brief screening and open discourse about sexuality, physicians can address a crucial component of patient well-being that is often neglected in general practice.

Ethical approval

This study has been approved by the Ethics Committee of Gazi Yaşargil Education and Research Hospital (approval date 09/05/2025, number 459). Written informed consent was obtained from the participants.

Author contribution

Surgical and Medical Practices: SD, SFT, ES, SUD; Concept: SD, SFT, ES, SUD; Design: SD, SFT, ES; Data Collection or Processing: SD, SFT, ES, SUD; Analysis or Interpretation: SD, SFT, ES, SUD; Literature Search: SD, SFT, ES, SUD; Writing: SD, SFT, ES, SUD. All authors reviewed the results and approved the final version of the article.

Source of funding

The authors declare the study received no funding.

Conflict of interest

The authors declare that there is no conflict of interest.

REFERENCES

1. Elnazer HY, Baldwin DS. Structured review of the use of the Arizona Sexual Experiences Scale in clinical settings. Hum Psychopharmacol. 2020; 35(3): e2730. **[Crossref]**
2. Yan Y, Zhou L, La R, et al. Is erectile dysfunction associated with osteoarthritis and rheumatoid arthritis? Insights from a population-based study. Sex Med. 2024; 12(3): qfae028. **[Crossref]**
3. Zapata C, López-Escámez JA. A pilot study of sexual health in patients with Ménière's disease. Acta Otorrinolaringol Esp. 2011; 62(2): 119-25. **[Crossref]**
4. Cheng YF, Xirasagar S, Kuo NW, Chung SD, Lin HC. Association of erectile dysfunction with tinnitus: a nationwide population-based study. Sci Rep. 2021; 11(1): 6982. **[Crossref]**
5. Weidt S, Bruehl AB, Straumann D, Hegemann SC, Krautstrunk G, Rufer M. Health-related quality of life and emotional distress in patients with dizziness: a cross-sectional approach to disentangle their relationship. BMC Health Serv Res. 2014; 14: 317. **[Crossref]**
6. Liu X, Feng Z, Galling B, et al. Gender specific sexual dysfunction in patients with depression. Front Psychiatry. 2023; 14: 1194228. **[Crossref]**
7. Wu X, Zhang Y, Zhang W, et al. The association between erectile dysfunction and sleep parameters: data from a prospective, controlled cohort. J Sex Med. 2022; 19(9): 1387-96. **[Crossref]**
8. Herdman D, Norton S, Pavlou M, Murdin L, Moss-Morris R. The role of prediagnosis audiovestibular dysfunction versus distress, illness-related cognitions, and behaviors in predicted ongoing dizziness handicap. Psychosom Med. 2020; 82(8): 787-95. **[Crossref]**
9. Jacobson GP, Newman CW. The development of the Dizziness Handicap Inventory. Arch Otolaryngol Head Neck Surg. 1990; 116(4): 424-7. **[Crossref]**
10. Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. Psychiatry Res. 1989; 28(2): 193-213. **[Crossref]**
11. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001; 16(9): 606-13. **[Crossref]**
12. Spitzer RL, Kroenke K, Williams JBW, Löwe B. A brief measure for assessing generalized anxiety disorder: the GAD-7. Arch Intern Med. 2006; 166(10): 1092-7. **[Crossref]**