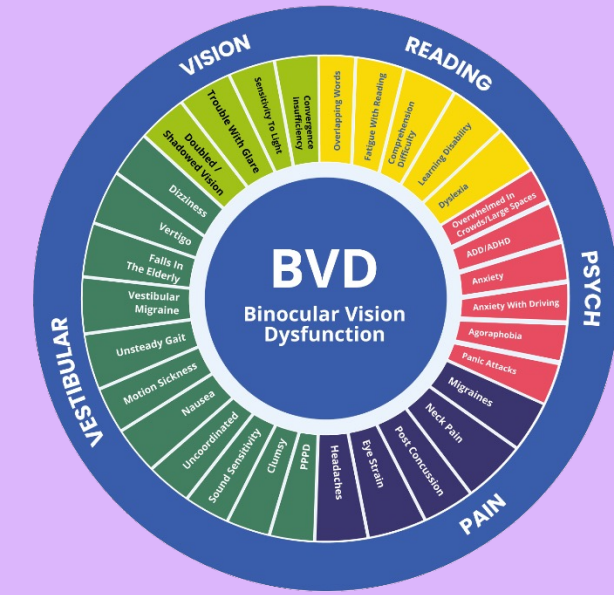
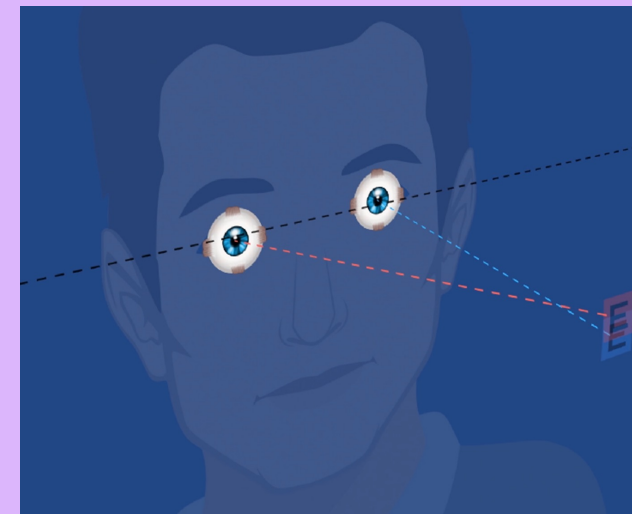


# Is It Their Eyes? Could the patients' Psych Symptoms be Due to Binocular Vision Dysfunction?

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## What Is Binocular Vision Dysfunction?

Binocular vision dysfunction (BVD) is a condition in which the eyes are subtly misaligned and have difficulty working together efficiently, leading to visual disturbances and a host of symptoms that include many which are psychiatric in nature.



BVD affects approximately 1 in 5 in the general population, but data suggests it may potentially be >50% of patients who are presenting for outpatient psychiatric treatment of anxiety disorders, learning difficulties, focus/concentration disorders, or sensory processing disorders. The vast majority of those with BVD are undiagnosed due to lack of awareness within the medical community, and inadequate training and assessment methods within the general vision community. Traditional optometry assessment will not identify this disorder, as assessment by a NeuroVisual™ Medicine trained provider is necessary. Studies show that in over 2/3 of cases, symptoms do not present as being visual in etiology, leading BVD patients to seek treatment with multiple non-vision providers (PCP, ENT, Psychiatry, Neurology, Chiropractic, etc.) before receiving an accurate diagnosis. These patients have had extensive testing (CT, MRI), tried multiple medications and treatments, but have experienced inadequate/minimal symptomatic relief.

Treatment for BVD consists of glasses with microprism lenses that realign the incoming images to correct vertical or horizontal heterophorias. When images are properly aligned, symptoms are substantially reduced or eliminated for most patients.

## How Is This Relevant To Psychiatry?

Psychiatry regularly considers potential organic causes for symptoms in patients by evaluating for possible problems with blood sugar, thyroid function, vitamin deficiencies, genetic anomalies, etc.. Most psychiatric providers are unaware of BVD and its prevalence in our patient population. The purpose of this project is to educate psychiatric providers on this condition, how to properly screen for it and where to refer patients for proper treatment.

By utilizing a validated BVD screening tool in initial intake or subsequent evaluation, we are well positioned to identify likely BVD patients and refer them to qualified providers for evaluation and treatment. By doing so, we can improve or eliminate symptoms for many patients and avoid unnecessary medications. It is quite possible that rather than treatment-resistant, many of our most difficult patients are simply misdiagnosed.

## Abstract

This study aimed to determine the prevalence of binocular vision dysfunction (BVD) among patients seeking treatment for anxiety and depression symptoms at an outpatient clinic. A total of 123 patients were included in the study, each of whom completed a Binocular Vision Dysfunction Questionnaire (BVDQ™) as part of their intake paperwork. The results revealed a significant proportion of patients screening positive for BVD. These findings highlight the importance of considering binocular vision assessment in the management of anxiety and depression. Symptoms of BVD include eye strain, headaches, neck pain, dizziness, motion sickness, nausea, double vision, blurred vision, difficulty reading or concentrating, light sensitivity, and problems with depth perception.

## Introduction

While anxiety and depression are commonly encountered in outpatient psychiatric clinics, the potential association between these mental health conditions and BVD remains understudied. Symptoms of BVD can manifest in various ways, including eye strain, headaches, neck pain, dizziness, motion sickness, nausea, double vision, blurred vision, difficulty reading or concentrating, light sensitivity, and problems with depth perception. Often symptoms present in ways that could be mistaken for depression or anxiety such as social anxiety, agoraphobia, increased worry and sadness, anxiety with driving, panic attacks, and struggles with sensory overload.

Understanding the prevalence of BVD among patients seeking treatment for symptoms of anxiety and depression is crucial for identifying potential underlying causes and optimizing patient care. This study aimed to determine the prevalence of BVD and its potential impact on psychiatric symptoms among patients at an outpatient clinic, shedding light on the need for BVD screening in psychiatric settings.

## BVD Facts

- Pts with persistent post TBI/ABI symptoms have estimated 50% prevalence of BVD.
- Pts with history of reading/learning disorders have an est. 50% prevalence of BVD.

### BVD is frequently misdiagnosed as:

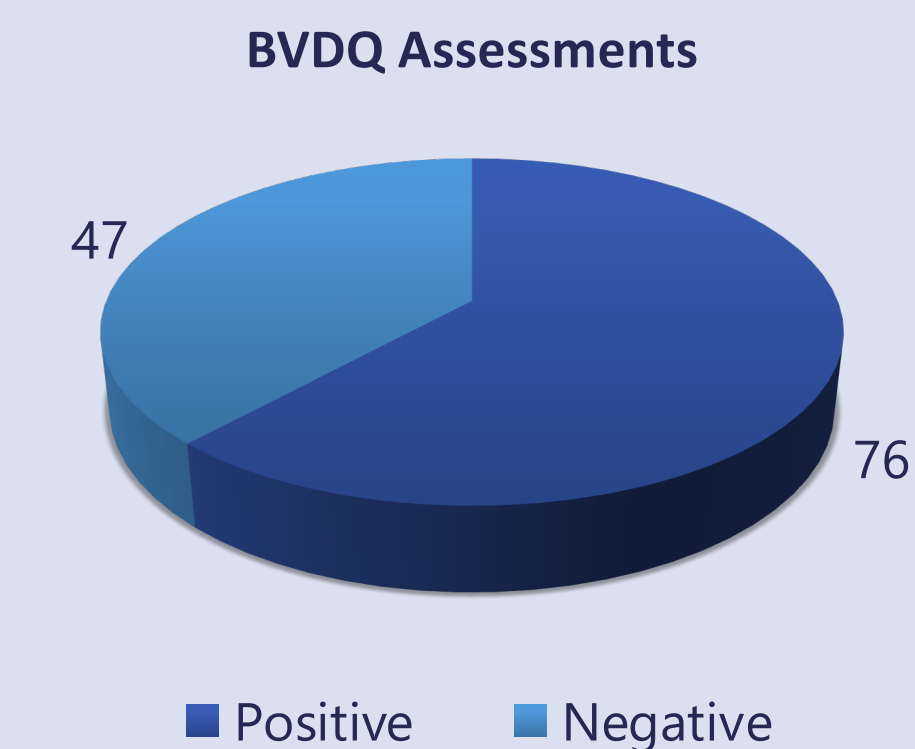
Vertigo	Dyslexia
Migraines	Panic Attacks
ADHD	Psychogenic Dizziness
Reading/Learning Disorders	Muscle Tension/Headaches
Agoraphobia	Generalized Anxiety Disorder
Meniere Disease	Sensory Overload

## Methods

This cross-sectional study included 123 patients aged 15 to 70 who presented at an outpatient psychiatry clinic in Angola, Indiana, seeking treatment for symptoms of anxiety and depression. The Binocular Vision Dysfunction Questionnaire (BVDQ™), a research validated screening tool, was administered to all patients as part of their intake paperwork. The results of the BVDQ were reviewed retrospectively. Scores of 15 or higher on the BVDQ indicate a positive result for potential BVD. The data were analyzed descriptively to determine the prevalence of BVD and assess the severity of symptoms.

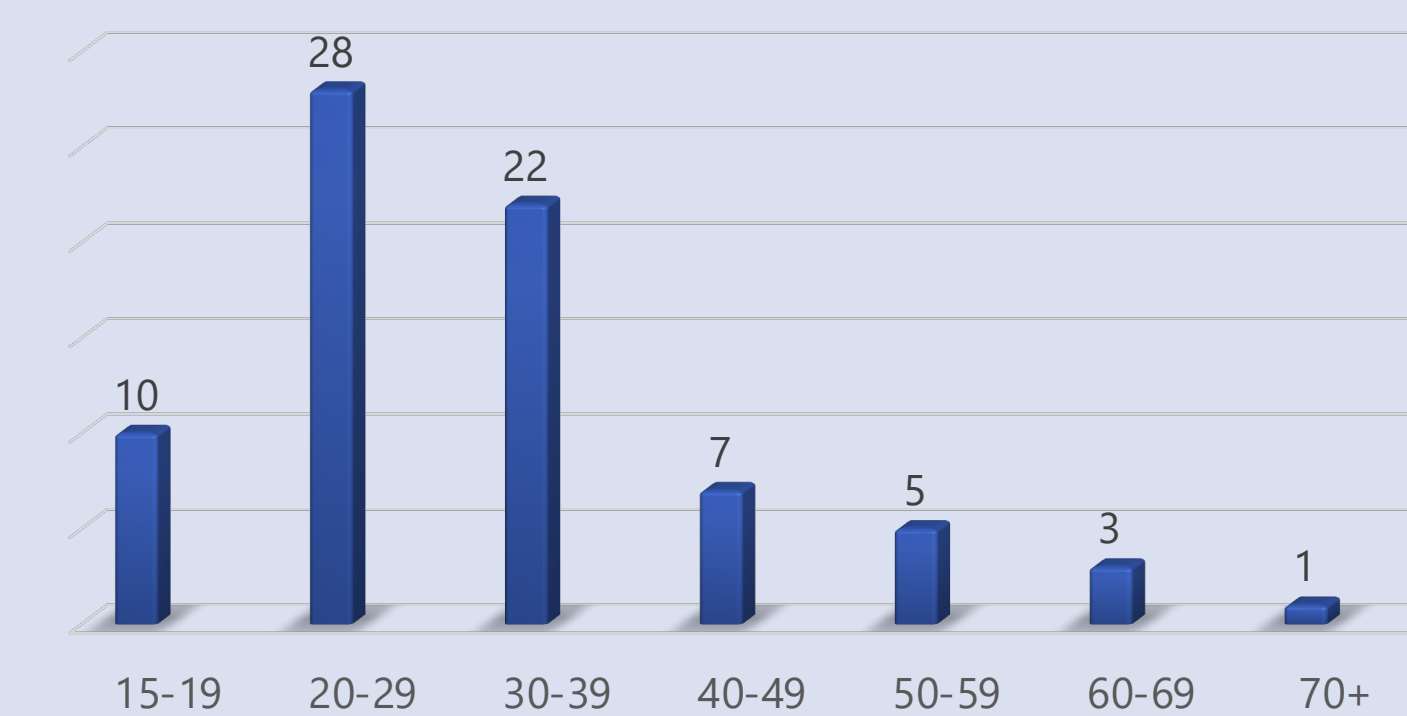
## Results

Out of 123 patients, 57.6% screened positive for BVD based on the BVDQ™.



A score of 15 or higher on the BVDQ is considered likely to benefit from evaluation and treatment for BVD. The higher the score, the more significant the level of symptoms the patient struggles with on a day-to-day basis. A breakdown of the BVDQ's completed in this study is shown below.

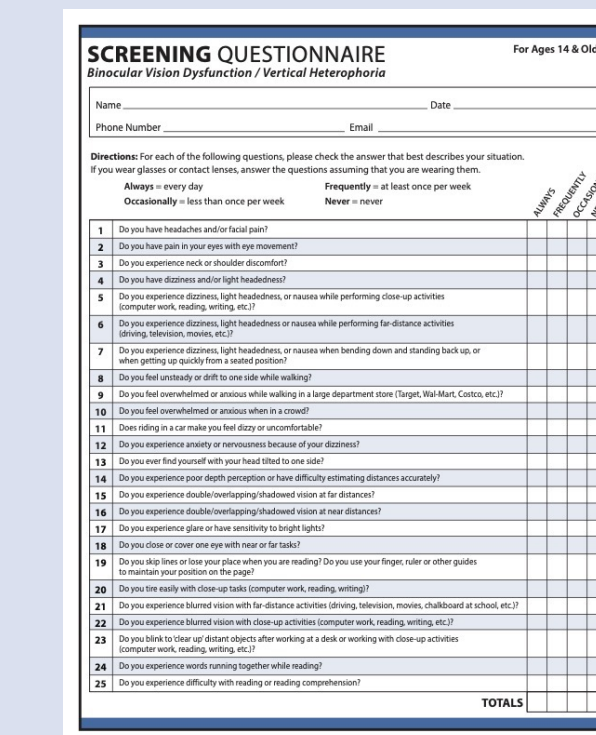
### Breakdown of Positive BVDQ Scores Severity of Symptoms Increases with Score



## Discussion and Conclusions

Our findings indicate a significant prevalence of and symptom severity of BVD among patients presenting for outpatient treatment of symptoms of anxiety and depression.

Integrating the BVDQ™ as a standard part of intake screening in psychiatric clinics, along with educating psychiatric providers about BVD and its prevalence amongst those seeking psychiatric treatment, is recommended to increase identification of patients who may benefit from evaluation for and treatment of BVD. By addressing the neurovisual etiology of the symptoms, unnecessary psychiatric medications and possible associated side effects can be avoided, leading to more effective patient care.



## Future Directions

Preparations are underway to conduct a significantly larger prevalence study that encompasses urban and rural outpatient clinics from each of the United States. This expanded study will provide a more comprehensive understanding of the prevalence of BVD among individuals seeking psychiatric treatment nationwide while providing data that is more generalizable than possible with this small-sample-size study.

The data and participants from this forthcoming study will form the basis for a longitudinal study, which will detail treatment outcomes and residual psychiatric symptoms, if present, among individuals with BVD. A longitudinal study of this nature will provide valuable insights into the long-term effects of BVD treatment and its impact on psychiatric symptoms.

Interprofessional collaboration between psychiatric providers and NeuroVisual™ Medicine specialists is needed to maximize patient identification and treatment. There are shortages of both educated psychiatric providers screening for BVD and trained NeuroVisual™ Medicine specialists equipped to properly evaluate and treat BVD. This creates an access-to-care issue that must be a goal for providers in both specialties to address.



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Please scan QR code with your phone for a video presentation of this poster along with links to the BVDQ™ screening tool.



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