

# The impact and burden of visual impairment in patients with dry age-related macular degeneration relative to older adults without major eye conditions: a qualitative interview study

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## INTRODUCTION

- Dry age-related macular degeneration (AMD) is a common and incurable macular disorder and is the leading cause of vision loss among adults over 55 years of age<sup>1,2</sup>
- Disease progression also typically impedes the functional ability of patients to carry out day-to-day activities<sup>3-6</sup>
  - As a result, patients with dry AMD may experience significant frustration, stress and/or anxiety<sup>3,7</sup>
- However, there is still a lack of a comprehensive understanding of the real-world impact of dry AMD and the burdens it imposes on both patients and caregivers
- Further insights from the patient's perspective are required to understand the potential value of the novel therapies for dry AMD

**Objective**

- To assess the functional impairment and humanistic burden associated with dry AMD vision loss, relative to the experience of older adults without dry AMD

## METHODS

- This cross-sectional qualitative interview study included:
  - Adult patients (aged ≥50 years) from the United States (US) and United Kingdom (UK) diagnosed with dry AMD
  - Adults (aged ≥50 years) with similar age, sex, and comorbidities as patients, but without dry AMD (controls)
- All eligible participants were required to have a best corrected visual acuity (BCVA) score from the most recent eye exam, after initial diagnosis of dry AMD for patients or within the past 8 years for controls
  - Controls were required to have a score of 20/60 or better
  - Patients or controls with wet AMD, other age-related eye conditions, or diseases that severely impair functioning were excluded from this study
- Semi-structured telephone interviews were conducted by trained moderators (March 2021–June 2023)
  - Information collected included demographic and clinical characteristic data, plus the impact of dry AMD or general vision symptoms on daily living and quality of life (QoL)
  - Caregiver interviews were also included in the study and results are reported separately (International Society for Pharmacoeconomics and Outcomes Research 2024, May 8; Poster presentation – PCR225)

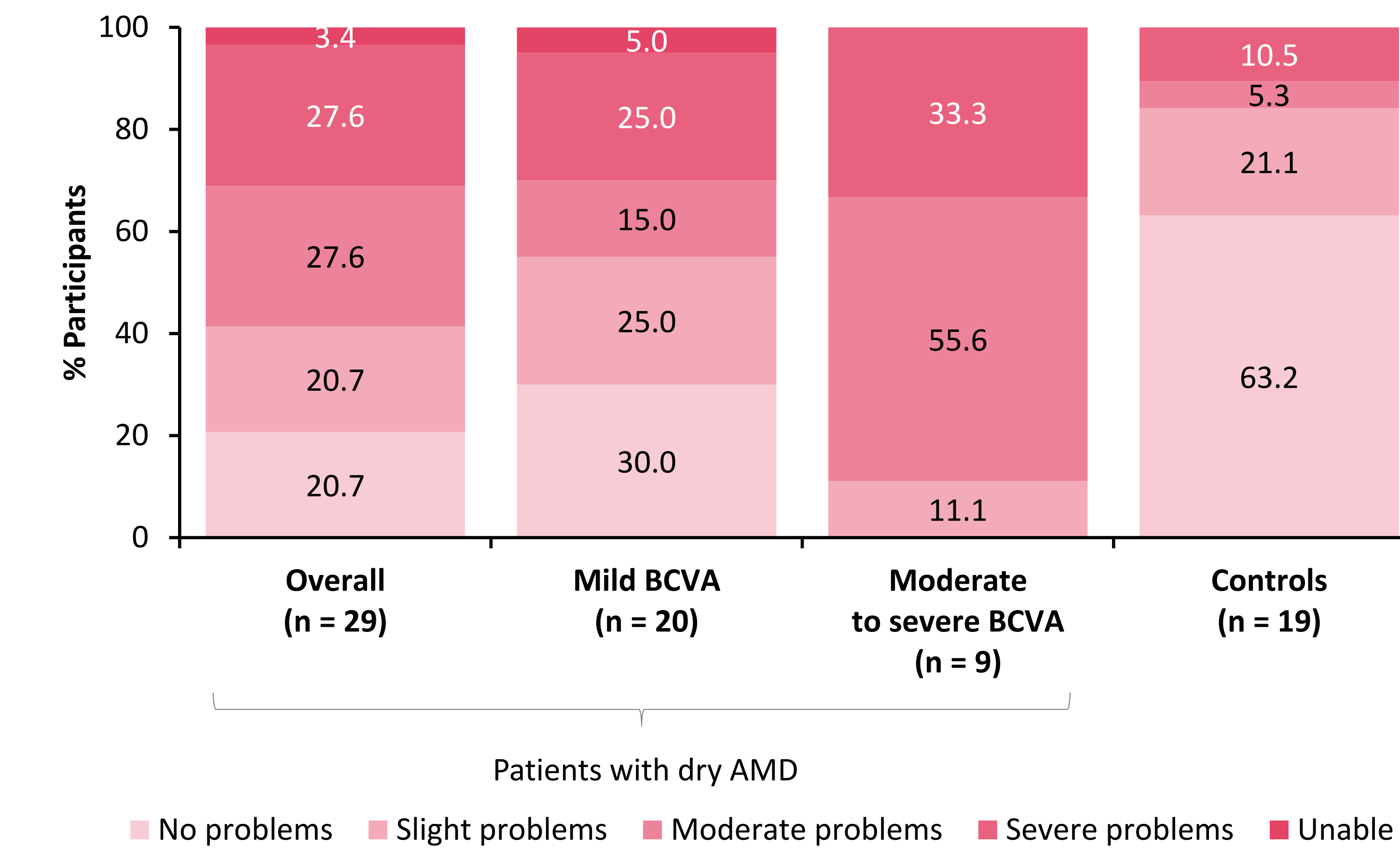
## RESULTS

### Patient demographics

- Overall, 30 patients with dry AMD (21 mild, 8 moderate, 1 severe visual impairment based on BCVA score) and 20 controls were interviewed
  - Patients and controls were predominantly female (63.3% and 65.0%, respectively)
  - Mean (standard deviation [SD]) age was 65.1 (7.8) years for patients and 63.4 (8.0) years for controls
  - Most patients (96.7%) and controls (95.0%) were from the US
- Patients had a mean (SD) of 3.4 (2.8) years since dry AMD diagnosis; additionally, two (6.7%) patients reported having a GA diagnosis
  - Half (50.0%) of patients reported to be assisted by a caregiver

Figure 1. Impact of dry AMD (in patients) and visual impairment (in controls) on the ability to perform usual activities

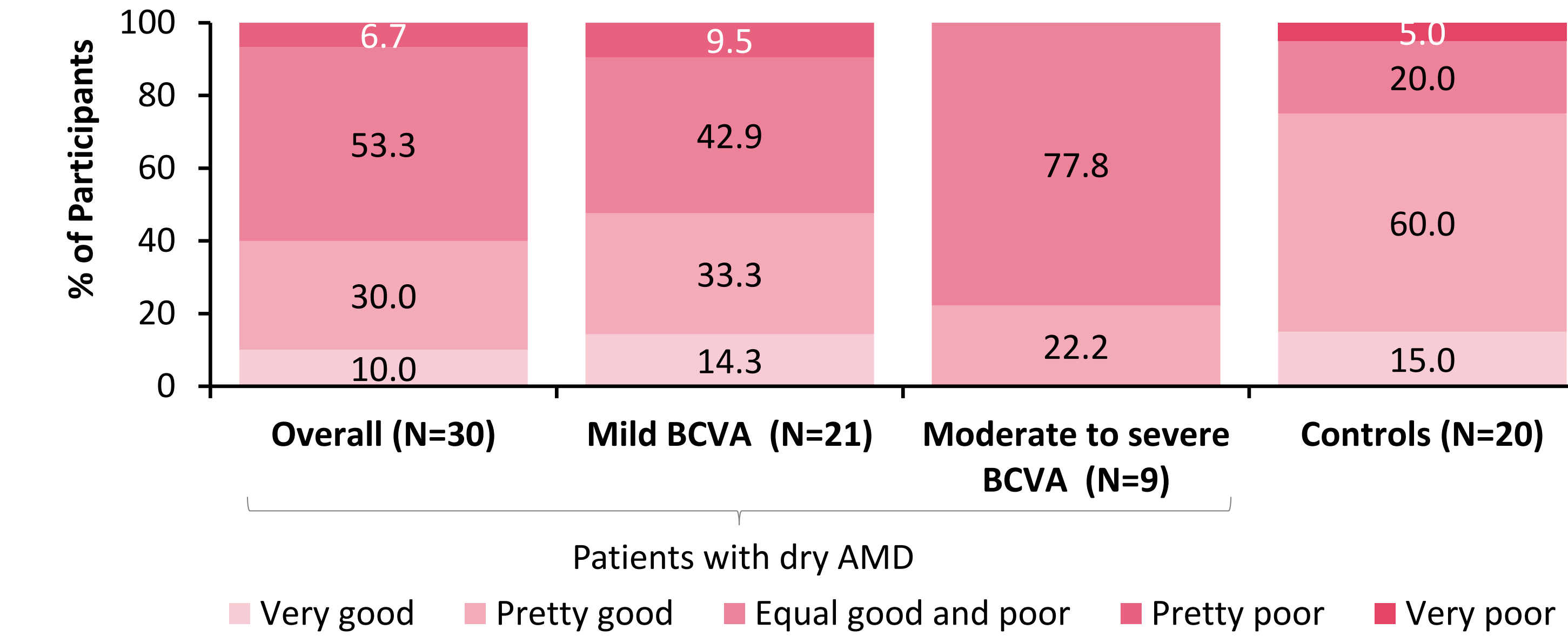
A) Ability to perform usual activities



### Impact on quality of life

- Overall, 60.0% of patients and 25.0% of controls reported general QoL as “equal good and poor” or worse (Figure 2)
  - All physical and most emotional health ratings were similar for patients versus controls
- Patients with moderate to severe visual impairment tended to report poorer physical health and more bothersome emotional problems than patients with mild visual impairment

Figure 2. Levels of QoL amongst patients and controls

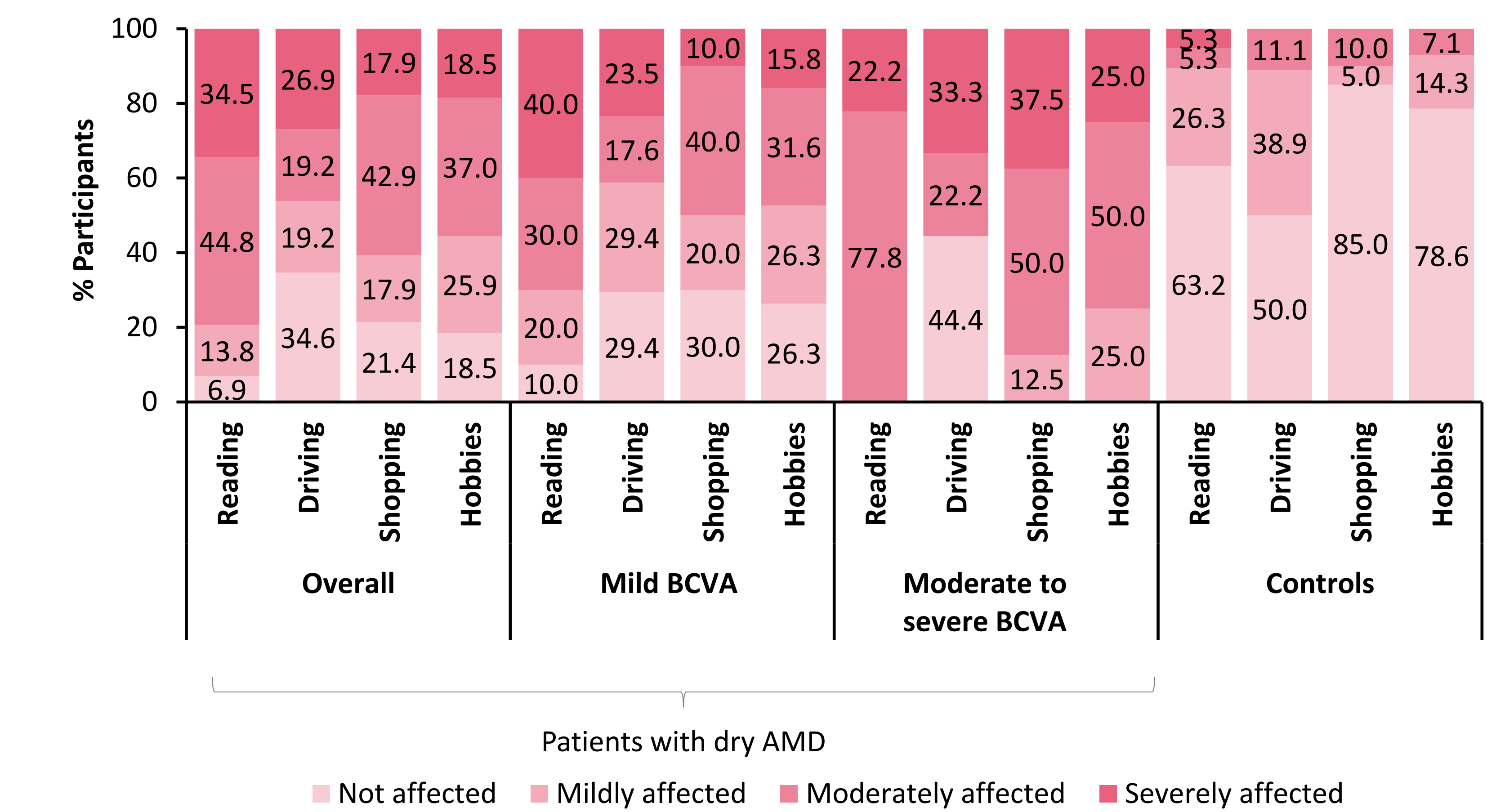


Mild BCVA was defined as a score >20/30–20/80. Moderate to severe BCVA was defined as a score >20/80–20/320. AMD, age-related macular degeneration; BCVA, best corrected visual acuity; QoL, quality of life.

### Impact on daily activities

- Most patients (58.6%) reported at least moderate problems performing usual activities in the last month relative to 15.8% of controls (Figure 1A)
- Patients reported a mean (SD) number of activities affected by dry AMD symptoms of 4.5 (2.0), while controls reported 2.1 (2.4) activities affected by their vision in the last month
- Fewer patients with mild BCVA were affected relative to moderate to severe BCVA (Figure 1A)
- Reading was patients' most affected activity, but was largely unaffected in most controls (Figure 1B); other commonly affected activities included shopping, hobbies, and driving
  - Among the patients engaging in these activities, while some patients with mild BCVA were 'not affected,' all patients with moderate to severe BCVA experienced at least some difficulty

B) Commonly affected activities



Percentages were calculated based on the total populations of participants that provided a response. In total, eight patients also stopped driving altogether (reported not being affected); seven of which reported that this was due to dry AMD symptoms. Mild BCVA was defined as a score >20/30–20/80. Moderate to severe BCVA was defined as a score >20/80–20/320. AMD, age-related macular degeneration; BCVA, best corrected visual acuity

## CONCLUSIONS

- Due to vision loss, patients with dry AMD had lower ability to perform usual activities relative to controls; reading was the most commonly affected activity
- Functional ability was substantially impacted even for patients with mild visual impairment, but to a lesser extent relative to patients with moderate or severe impairment

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**References:** 1. Bakri SJ, et al. *J Manag Care Spec Pharm*. May 2023;29(5-a Suppl):S2-S11; 2. Deng Y, et al. *Genes Dis*. Jan 2022;9(1):62-79; 3. Schultz NM, et al. *Ophthalmol Ther*. Mar 2021;10(1):151-164; 4. Taylor DJ, et al. *Eye (Lond)*. Mar 2020;34(3):461-473; 5. Logan AJ, et al. *Invest Ophthalmol Vis Sci*. Jun 3 2020;61(6):38; 6. Macnamara A, et al. *Sci Rep*. Mar 8 2022;12(1):4033; 7. Carlton J, et al. *Br Ir Orthopt J*. Nov 12 2019;15(1):133-141

