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Objectives: Optic neuritis (ON) is commonly associated with demyelinating diseases and may represent their clinical manifestation at onset. Frequent relapses can lead to a progressive accumulation of visual deficits, significantly impacting patients' quality of life and social performance [1,2].

We aimed to report on the burden of demyelinating ON through a comprehensive literature review.

Results: Of the 56 articles analyzed, 6 were selected for the final analysis, which examined the socioeconomic burden and employment rate among patients with ON. The remaining 50 were excluded due to reasons such as out-of-scope outcomes and/or insufficient data. Most studies were retrospective and focused on adult populations from various regions of the world. Across the included cohorts, female predominance ranged between 67-92%. In North America, ON was reported in 53-57% of neuromyelitis optica spectrum disorders (NMOSD) cases[1]. In an Asian studies, which demonstrated a higher prevalence of NMOSD compared to multiple sclerosis(MS), up to 66% of patients experienced visual deficits, with an employment rate of only 44%[2]. In Europe, 69% of ON patients were employed, and 53% received public support. When ON was associated with MS, the employment rate dropped to 66%, while the proportion receiving public support increased to 67%[3].

Materials and Methods: A comprehensive literature review was conducted in accordance with PRISMA guidelines, focusing on PubMed articles in English published between Jan. 2000 and April 2025.

The search strategy combined terms such as "optic neuritis" with "burden" or "socioeconomic" to identify relevant studies in titles or abstracts.

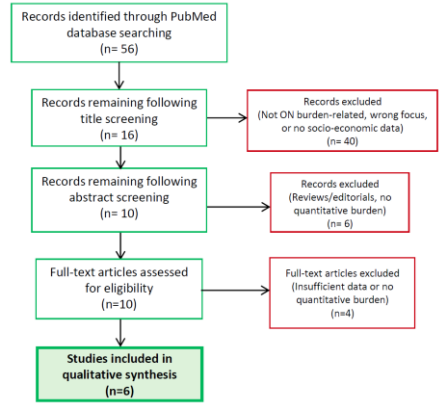


Figure. The global socioeconomic burden of optic neuritis. A comprehensive literature review. PRISMA flow chart.

References	Study area	Study period	N. patients	Study disease	Employment drop rate (%)	Receiving public support (%)	Visual impairment
Amatya S. et al. 2024 [1]	USA	2010 - 2024	68	NMOSD	Not reported	Not reported	57%
Kadish R. et al. 2021	USA	2005 – 2019	47	NMOSD	Not reported	Not reported	53%
Jennum P. et al. 2013 [3]	Denmark	1998 - 2006	1677	MS	69% ^{ON} 66% ^{ON+MS}	52% ^{ON} 67% ^{ON+MS}	100%
Huang W., et al. 2020	China	2019 – 2020	210	NMOSD	48%	Not reported	51%
Han L., et al. 2022 [2]	China	2020	351	NMOSD	29%	Not reported	66%
Tisavipat N. et al. 2023	Thailand	2016 – 2021	44	NMOSD MS	Not reported	Not reported	20%

Table. The global socioeconomic burden of optic neuritis. A comprehensive literature review.

Discussion: Recurrent ON, particularly in the context of demyelinating disorders such as MS, NMOSD, is associated with persistent visual impairment and progressive neurological disability. These long-term outcomes significantly interfere with patients' ability to perform daily activities, reducing employment maintenance and social engagement by 34-56%. The chronic nature of these impairments places a substantial burden not only on individuals but also on healthcare systems and society, due to increased reliance on medical care, assistive services, and social support infrastructure[1,2].

Conclusions: Preventing relapses and ensuring the prompt and effective treatment of acute ON episodes are critical strategies to reduce both the clinical impact and the socioeconomic consequences of demyelinating disorders[3].

Bibliography:

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- Jennum P. et al. The socioeconomic consequences of optic neuritis with and without multiple sclerosis: a controlled national study. *Acta Neurol Scand* 2013;127:242-250.

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