



Review

The prevalence of amblyopia in Iran: A systematic review

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Abstract

Purpose: The aim of this study was to determine the prevalence of amblyopia in the population of Iran.

Methods: This article is a systematic review. A comprehensive search was conducted in PubMed, Scopus, Science Direct, Ovid, Web of Science, SID, Magiran, with appropriate terms. Information related to the sample size and the prevalence of amblyopia was extracted and summarized in tables. Analysis was performed using STATA software.

Results: From 551 articles that were originally extracted from the databases, 31 articles met the criteria for entering the review. These studies were conducted in different regions of Iran. The prevalence of amblyopia in different regions varied between 0.19 and 3.69%. Study results were heterogeneous ($I^2 = 99.7\%$), and therefore, a meta-analysis was not done.

Conclusions: The prevalence of amblyopia in Iran is very different. In addition to conducting national screenings, it is necessary to report the incidence of amblyopia and its related factors in different parts of the country.

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Keywords: Amblyopia; Systematic review; Iran; Prevalence

Introduction

Amblyopia, or Lazy Eye, is a kind of visual impairment with no physical defect in the eyes or in the optic nerve.¹ While this type of disorder can cause visual impairment or blindness in the absence of timely diagnosis and treatment, with early diagnosis, many of its possible complications are reduced.^{2–5}

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When one eye develops naturally and the other eye does not, the lagged eye becomes visually impaired, or in other words, lazy.^{5,6} Although in most cases the defect happens in one eye, bilateral amblyopia is also possible.⁷

Several factors can lead to this defect, including congenital abnormalities in the eye structure such as cataracts, ptosis, strabismus, and refractive problems such as myopia, and astigmatism.^{8–10} Some studies have referred to strabismus as the most common cause of amblyopia.⁸

Amblyopia can cause consequences such as learning impairment and failure in education and communication.¹¹ There is also evidence that, in addition to imposing an economic burden on the society, this disease causes unusual psychological disorders, social anxiety, and inability to perform in group activities.⁶

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A wide range has been reported for the prevalence of this disorder worldwide, which has been from 0.2 to 6.2.^{12–17} Several studies in different regions of Iran have also reported the prevalence of amblyopia.^{18–37}

Awareness of the prevalence of this type of visual impairment provides the required information for policy makers to plan for timely prevention, diagnosis, and treatment. In this article, we systematically review studies about the prevalence of amblyopia in Iran.

Methods

Search strategy and inclusion criteria

The inclusion criteria were studies which reported the prevalence of amblyopia among an Iranian-based population and diagnosed amblyopia with any screening tool.

Studies were not excluded based on publication status, language, type of screening tool, or etc. In this paper, both English and Persian keywords were used to search for articles. The search was restricted to studies done in Iran.

Studies were identified by searching PubMed, Embase, Web of Science, Scopus, Ovid, SID, Civilica and Magiran.

Conference proceedings were searched in Scopus and Civilica, and dissertations were searched in the Irandoc website. The search was done up to 22 October 2017. It took about one week to do the full search.

The search terms used were Amblyopias; Lazy Eye; Eye, Lazy; Eyes, Lazy; Lazy Eyes; Anisometropic Amblyopia; Amblyopia, Anisometropic; Amblyopias, Anisometropic; Anisometropic Amblyopias; Amblyopia, Developmental; Amblyopias, Developmental; Developmental Amblyopia; Developmental Amblyopias; Amblyopia, Suppression; Amblyopias, Suppression; Suppression Amblyopia; Suppression Amblyopias; Stimulus Deprivation-Induced Amblyopia; Stimulus Deprivation Induced Amblyopia; Amblyopia, Stimulus Deprivation Induced; Amblyopias, Stimulus Deprivation-Induced; Deprivation-Induced Amblyopia, Stimulus; Deprivation-Induced Amblyopias, Stimulus; Stimulus Deprivation-Induced Amblyopias; Prevalence; Incidence; Frequency; Occurrence; Iran. Details about the search strategy and the results can be found in the article [Appendix](#).

All retrieved articles were sent to Endnote, and after that, duplicates were removed. Then based on the title and abstract of the articles, unrelated articles were excluded. Subsequently,

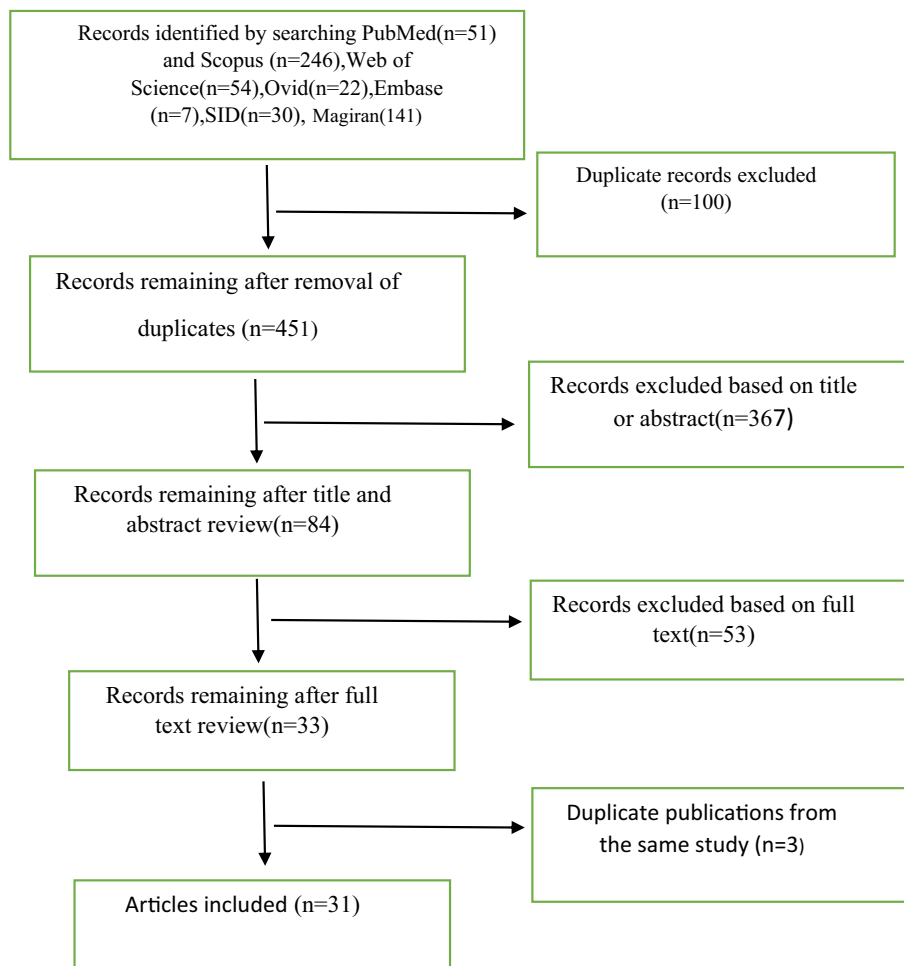


Fig. 1. Flowchart of study selection.

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