

## عنوان مقاله:

Modeling Time to Blindness of Glaucoma Patients: A Case Study at Jimma University Medical Center

## محل انتشار:

مجله تحقیقات در علوم سلامت, دوره 22, شماره 2 (سال: 1401)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

Background: Glaucoma is a significant public health problem due to its substantial increase in the projected number of glaucoma cases. In Ethiopia, glaucoma accounts for ۵.۲% of irreversible blindness and is the fifth main cause of blindness. The main objective of this study was to modeling time to blindness of left and right eyes of glaucoma patients. Study Design: An institution-based retrospective cohort study. Methods: This study was conducted among ۳۱۵ glaucoma patients admitted to the Ophthalmology Department of Jimma University Medical Center (JUMC), Southwest Ethiopia, from January ۱, ۲۰۱۶, to August ۳۰, ۲۰۲۰. Kaplan-Meier survival analysis and semiparametric and parametric copula models were applied to identify factors that affect time to the blindness in glaucoma patients and the dependence between time to the blindness of the left and right eyes, respectively. An Akaike information criterion (AIC) was used to select the best non-nested model. Results: In total, ۲۱۱ (۶۶.۹%) out of ۳۱۵ glaucoma patients were blind, whereas ۱۰۴ (۳۳.۱%) patients were censored. The median time to the blindness of the left and right eyes was determined to be ۱۲ months. The result suggested that the risk of the blindness in male patients was ۱.۰۰۵ ( $P = ۰.۰۱$ ) times higher than that in female patients, and the risk of the blindness in patients who had early, moderate, and advanced glaucoma was estimated to be ۰.۵۸۲ ( $P = ۰.۰۰۲$ ), ۰.۴۸۵ ( $P = ۰.۰۰۱$ ) and ۰.۸۸۷ ( $P = ۰.۰۰۳$ ) times less than that in the patients with absolute glaucoma, respectively. Conclusions: Age, place of residence, gender, type of medication, diabetes disease, stage of glaucoma, duration of treatment, intraocular pressure (IOP), and cup-disk ratio were significantly associated with and affected by the time to the blindness of left and right eyes in glaucoma patients.

:Awareness should be given to the community to reduce the burden of glaucoma. Article history

## کلمات کلیدی:

Archimedean copula families, Ethiopia, Glaucoma, Kendall's tau, Time to blindness

## لینک ثابت مقاله در پایگاه سیویلیکا:

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