

## Documents

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**Prevalence and Risk Factors of Dry Eye Disease in the South of Palestine**

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**Abstract**

Background: The prevalence of dry eye disease (DED) is rising globally and needs to be urgently addressed by medical professionals because it lowers patients' quality of life. There are as yet no available data in the literature about the prevalence of and risk factors for DED in the Gaza Strip, a gap that the present study seeks to address. Methods: A cross-sectional study was carried out between March and August 2022 in Gaza governorates using a proportional stratified sampling technique. Only Gazan individuals  $\geq 18$  years old and able to follow the instructions were included. The Ocular Surface Disease Index (OSDI) questionnaire, which has previously been translated into Arabic and validated, was applied to evaluate DED symptoms. Subjective clinical tests for DED conducted were tear meniscus height (TMH), meibomian gland dysfunctions (MGDs), Marx line (ML), conjunctival Lissamine green staining (LGS), tear film break-up time test (TBUT), corneal fluorescein staining (CFS) and Schirmer II tear test (STT). DED was defined based on an Arab-OSDI score  $\geq 13$  and at least one positive clinical sign. Results: A total of 426 participants were assessed from four areas (North Gaza Strip, 82; Gaza City, 147; Mid-Zone Gaza Strip, 62; South Gaza Strip, 135). The prevalence of DED in the present study was 31.5% (95% CI: 27.1, 36.1). Age  $> 50$  years old (odds ratio [OR] = 10.45; 95% CI: 2.95, 37.05;  $P < 0.001$ ), female gender (OR = 3.24; 95% CI: 1.40, 7.52,  $P = 0.006$ ), menopause or pregnancy (OR = 2.59; 95% CI: 1.25, 5.35;  $P = 0.03$ ) and pharmacotherapy (artificial tears; OR = 9.91; 95% CI: 2.77, 35.46;  $P < 0.001$ ) were each associated with DED symptoms. South Gaza Strip (OR = 0.04; 95% CI: 0.01, 0.12;  $P < 0.001$ ), unemployed (OR = 11.67; 95% CI: 1.43, 95.44;  $P = 0.02$ ), non-consumption of caffeine (OR = 0.40; 95% CI: 0.19, 0.88;  $P = 0.02$ ) and TMH  $< 0.2$  (OR = 1.80; 95% CI: 1.02, 3.19;  $P = 0.04$ ) were associated with TBUT  $< 5$  s. LGS was associated with those  $> 50$  years old (OR = 2.70; 95% CI: 1.38, 5.28;  $P = 0.004$ ), previous refractive or ocular surface surgeries (OR = 2.97; 95% CI: 1.34, 6.59;  $P = 0.008$ ) and CFS  $\geq 1$  (OR = 1.91; 95% CI: 1.07, 3.44;  $P = 0.03$ ). Conclusion: Various aspects of DED were linked with different risk factors, suggesting that DED subtypes have different underlying pathophysiologies. © Penerbit Universiti Sains Malaysia, 2024.

**Author Keywords**

aqueous tear deficiency; clinical signs; dry eye disease; evaporative dry eye; OSDI

**Index Keywords**

acetylsalicylic acid; adult, Article, cross-sectional study, dry eye, female, human, logistic regression analysis, male, meibomian gland dysfunction, middle aged, Ocular Surface Disease Index, quality of life, risk factor, Schirmer test

**Chemicals/CAS**

acetylsalicylic acid, 493-53-8, 50-78-2, 53663-74-4, 53664-49-6, 63781-77-1

**Tradenames**

SPSS version 23.0, IBM, United States

**Manufacturers**

IBM, United States

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