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ORIGINAL ARTICLE

The Role of Lifestyle in Preventing Dry Eye Syndrome

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ABSTRACT

Dry eye syndrome is a prevalent ocular condition characterized by tear film instability and ocular surface injury, significantly impacting the quality of life. This study analyzed 100 participants at Dijlah University, consisting of 55 women and 45 men, to evaluate the role of lifestyle in preventing this disorder. Results indicated a high prevalence of dry eye (85%), with significant associated symptoms including headaches (75%), red eyes (73%), and blurred vision (55%). Behavioral risk factors were prominent, as 55% of the cohort was smokers and 40% regularly wore glasses. Notably, despite the high symptom rate, 95% of affected individuals had not sought medical consultation. Chronic conditions were present in 41% of the group, further complicating the clinical picture. The study concludes that environmental factors and smoking are major contributors to ocular dryness in this population. Preventative measures such as using filter glasses, regular eye moisturization, and lifestyle modifications are essential for effective management. The conclusion is that a large percentage of people have dry eyes due to a range of causes, such as the environment and atmosphere, in addition to many other factors that might cause dryness. To avoid dry eyes, people should wear sunglasses and filter glasses while reading, using a computer, or using a phone. They should also regularly moisturize their eyes.

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1- INTRODUCTION

Dry eye syndrome, also known as keratoconjunctivitis sicca, is a common eye condition characterized by insufficient or poor tear production, which can lead to eye irritation, vision issues, and an increased risk of ocular complications [1, 2]. The disease results in an unstable tear film and surface damage, often exacerbated by environmental stressors and lifestyle choices. Recent 2025-2026 data highlight that dry eye prevalence is scaling globally due to low humidity and dust, which are particularly relevant in university settings [3]. Smoking remains a critical risk factor, with 2025 research indicating it disrupts all layers of the tear film and reduces Schirmer test scores. Furthermore, the rise of "Digital Eye Strain" from excessive screen use often exceeding seven hours daily has become a primary independent predictor of symptom severity in 2025. Modern clinical perspectives also link systemic diseases and their associated medications as "iatrogenic" causes of aqueous deficiency [4, 5]. Additionally, a 2025 meta-analysis confirmed that headaches are not merely a symptom but an independent risk factor, creating a vicious cycle of neuroinflammation. Effective management now emphasizes the efficacy of new treatments, such as advanced artificial tears and prescription interventions, alongside strict environmental controls. Improving patient

awareness is vital, as many individuals currently ignore symptoms or lack knowledge regarding available 2026 therapeutic options. Dry eye syndrome, which can result in an unstable tear film, damage to the eye's surface, and irregularities in the nerves, can be caused by several illnesses [6, 7].

The goal of the study, as outlined in the provided text, is primarily to evaluate the role of lifestyle in preventing dry eye syndrome within a specific population. According to the research document, the study aims to achieve this through several specific objectives; Identifying and investigating potential risk factors including age, gender, underlying medical conditions, and environmental factors (such as smoking and digital screen use). Analyzing the frequency of dry eye syndrome (found to be 85% in this cohort), and its associated symptoms like headaches, red eyes, and blurred vision. Examining how daily habits such as smoking, the use of glasses or contact lenses, and the duration of digital screen exposure impact ocular health.

2- MATERIALS AND METHODS

A case-control study collected 100 cases, 45 males and 55 females, aged 15-75 years, between December 2024 and April 2025 at Dijlah University, including students and faculty members.

Table (1): Categories covered by the examination

Number of Patients	100
Age	15-25 26-37 38-60 60-75
Sex	
Male	45
Female	55

A questionnaire was developed and produced before the administration of Schirmer's Test, asking participants about their sociodemographic status, age, gender, smoking, alcohol consumption, chronic illnesses, and medications. Frequent use of glasses, contact lenses, visits to a doctor for dry eye, headache, and glaucoma in the field of vision, the amount of time they spend working on average each day, the use of computers, smartphones, and digital screens, air-conditioned environments, and sleep duration. The second step, Schirmer's Test, tracks the production of tears, uses particular filter paper strips, assesses methods for 100 instances, and finds aqueous-deficient dry eye [8, 9, 10].

3- RESULTS AND DISCUSSION

There were 55 women and 45 males among the 100 responders to the study. As seen in Table 2 and Figure 1. The pie graphic shows the percentages. Dark blue (55%) is a color that represents women. The color light blue (45%) represents men.

Table (2): The proportions of men and women

Gender Group	**Patients**	**%**
Male	45	45%
Female	55	55%
Total	100	100%

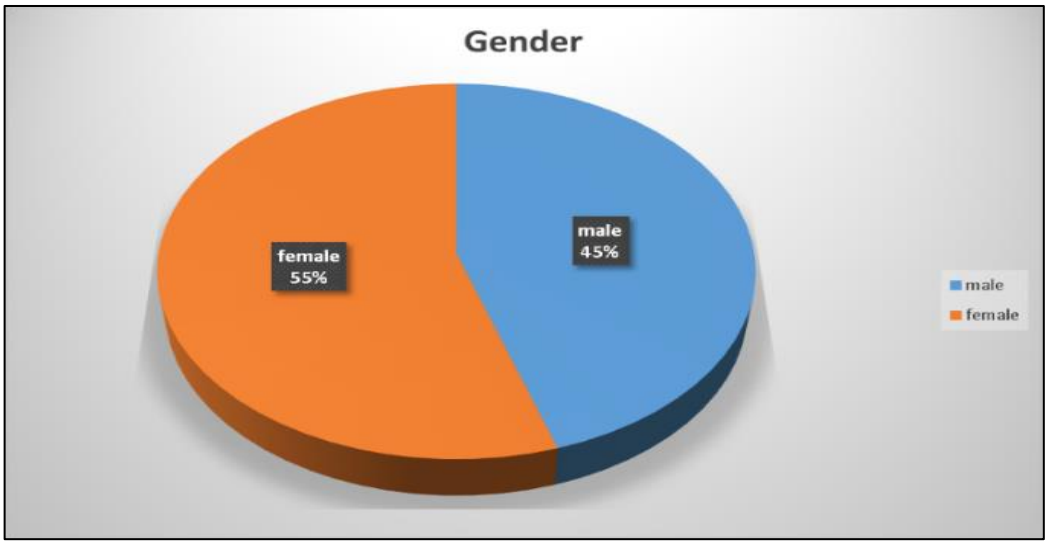

Fig (1): The proportions of men and women

Table 3 and Figure 2 show that 41 people, or 41%, have chronic conditions, while 59 people or 59%, and do not. The brighter portion represents those with chronic ailments, whereas the darker portion represents people without them. While the remaining people do not have chronic illnesses, four out of ten people do.

Table (3): The proportions of chronic diseases

Smokers Group	Patients	%
Chronic Diseases	41	41%
Don't have Chronic Diseases	59	59%
Total	100	100%

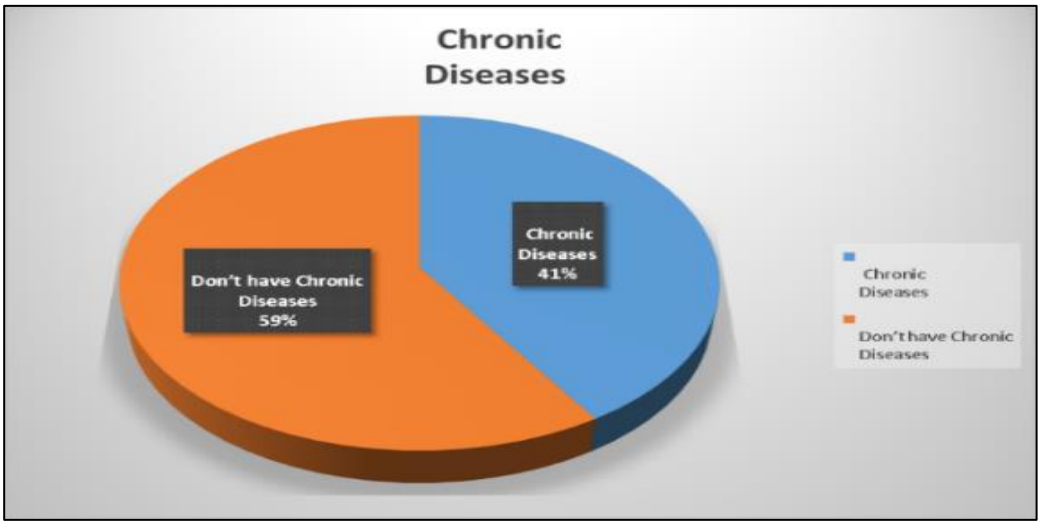

Fig (2): The proportions of chronic diseases

Table 4 and Figure 3 show the percentage of people who take drugs regularly. While 35% take medication every day, 65% do not require it. As a result, only roughly one-third of people have a condition that requires ongoing

monitoring and treatment. This is noteworthy since those with long-term diseases like chronic dry eye are expected to make up this 35%.

Table (4): The proportions of treatments continuing

Medications Regularly Group	Patients	%
Medications Regularly	35	35%
Don't Need Medications Regularly	65	65%
Total	100	100%

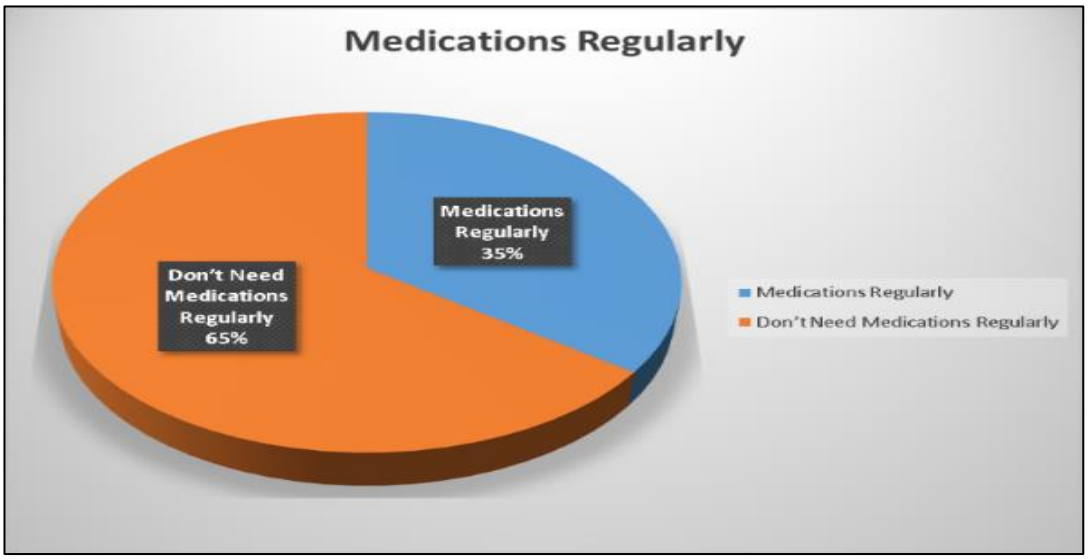

Fig (3): The proportions of people who take continuous treatments

The percentage of people who wear glasses is displayed in Table 5 and Figure 4. 60% don't wear or need spectacles, while 40% do. This percentage is not negligible. About 50% of individuals have impaired vision, and while glasses can assist, they can also make eyes dry or impact vision, especially if the wearer spends a lot of time in front of a screen.

Table (5): The proportions of people who wear glasses

Glasses Group	Patients	%
Glasses	40	40%
Don't Need Glasses	65	60%
Total	100	100%

Fig (4): The proportions of people who wear glasses

Table 6 and Figure 5 show the percentage of people who wear contact lenses. Just 10% of people wear contact lenses, whereas 90% do not. Contact lenses are much less common than spectacles, possibly because they must be used properly and because many people are aware that using them incorrectly might cause or exacerbate dry eye.

Table (6): The proportions of people who wear contact lenses

Contact Lenses Group	Patients	%
Contact Lenses	10	10%
Don't have Contact Lenses	90	90%
Total	100	100%

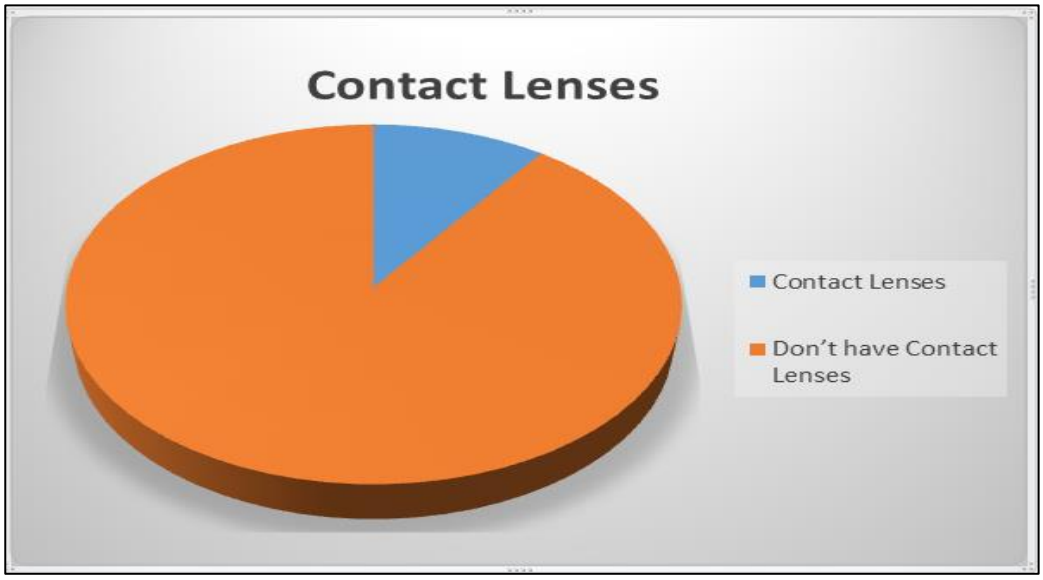

Fig (5): The proportions of people who wear contact lenses

Figure 6 and Table 7 list individuals with dry eye and whether they visit a doctor. 95 out of 100 people (95%) did not seek medical attention for dry eye, while five out of 100 (5%) did. Most people who suffer from dry eye don't visit a doctor. This could be due to their ignorance about the illness, their belief that it is not serious, or their ignorance of available treatments.

Table (7): The proportions of people who go to an ophthalmologist for a dry eye

See a Doctor For Dry Eye Group	**Patients**	**%**
See An Ophthalmologist for Dry Eye	5	5%
Don't See a Doctor for Dry Eye	95	95%
Total	100	100%

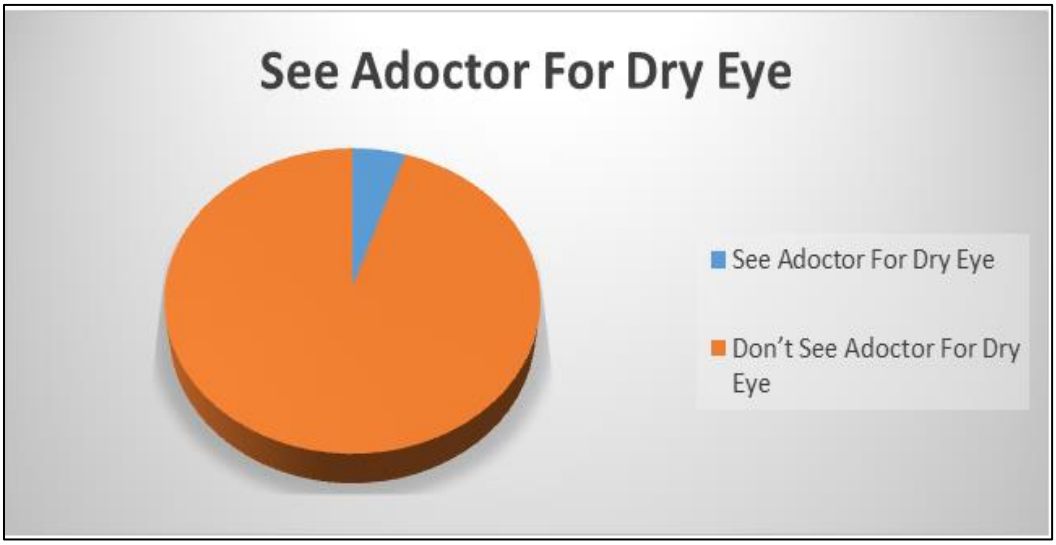

Fig (6): The proportions of people who go to to an ophthalmologist for a dry eye

The percentages of those who experience headaches are displayed in Table 8 and Figure 7. It is evident that 75 % of people experience headaches, while 25% do not. Since headaches can occasionally be a sign of dry eyes, they can be linked to the prevalent condition.

Table (8): The proportions of people who suffer from headaches

Headache Group	Patients	%
headache	75	75%
Don't have a headache	25	25%
Total	100	100%

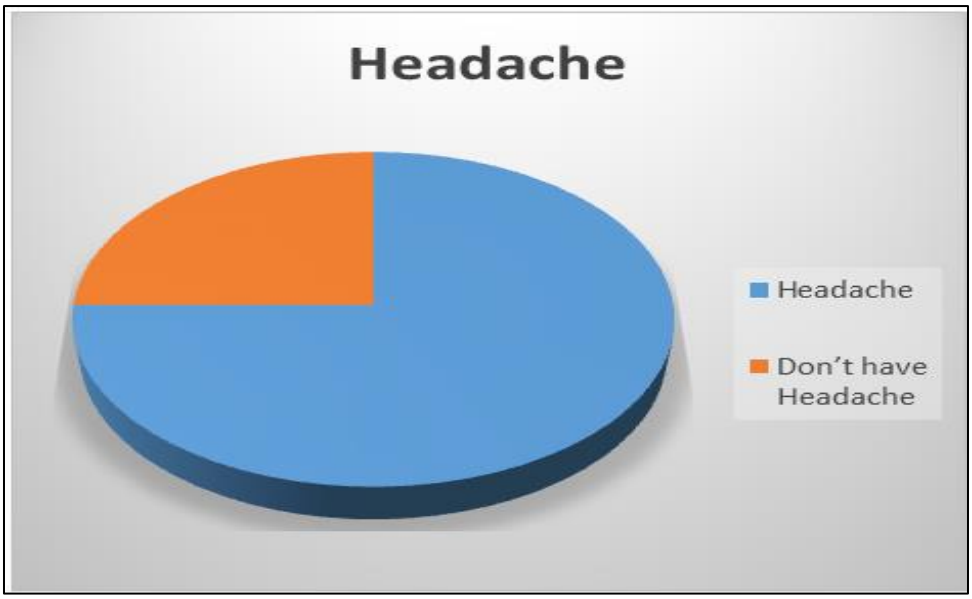

Fig (7): The proportions of people who suffer from headaches

People who complain of "gouache" or impaired vision are depicted in Table 9 and Figure 8. 45 individuals (45%) do not have blurred vision, but 55 individuals (55%) do. Over 50% of people experience fuzzy vision, which may be a sign of dry eyes may be caused by other factors such dryness, sleep deprivation, or vision issues.

Table (9): The proportions of people with gouache

Gouache In The Vision Group	Patients	%
Gouache In The Vision	55	55%
Don't have Gouache In The Vision	45	45%
Total	100	100%

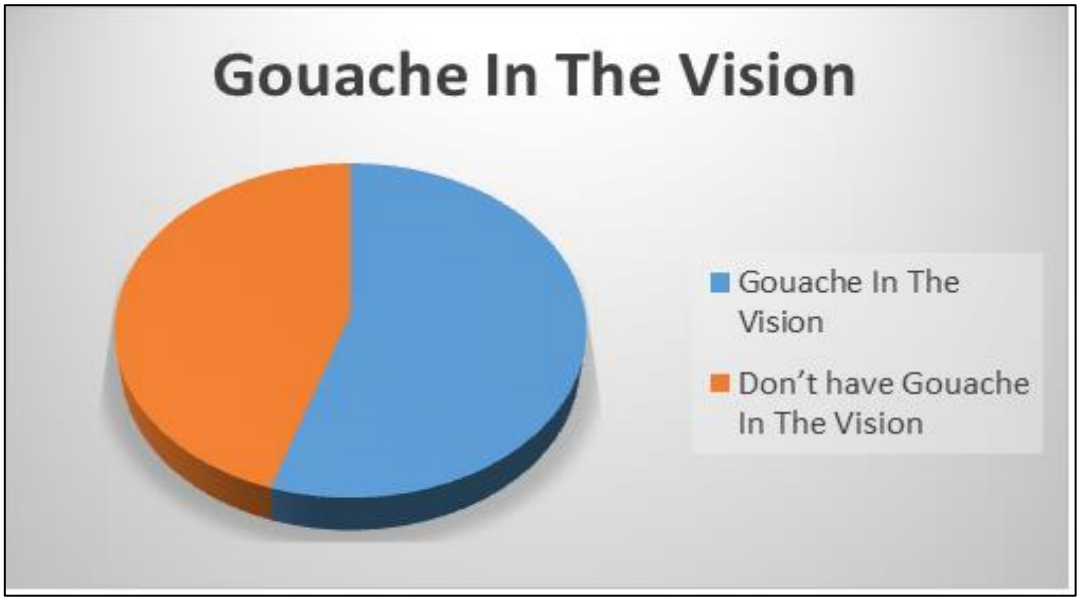

Fig (8): The proportions of people who suffer from gouache

The percentages of people with red eyes are displayed in Table 10 and Figure 9. 27% don't have red eyes, while 73% do.

Table (10): The proportions of people who suffer from red eyes

Red Eye Group	Patients	%
Red Eye	73	73%
Don't have Red Eye	27	27%
Total	100	100%

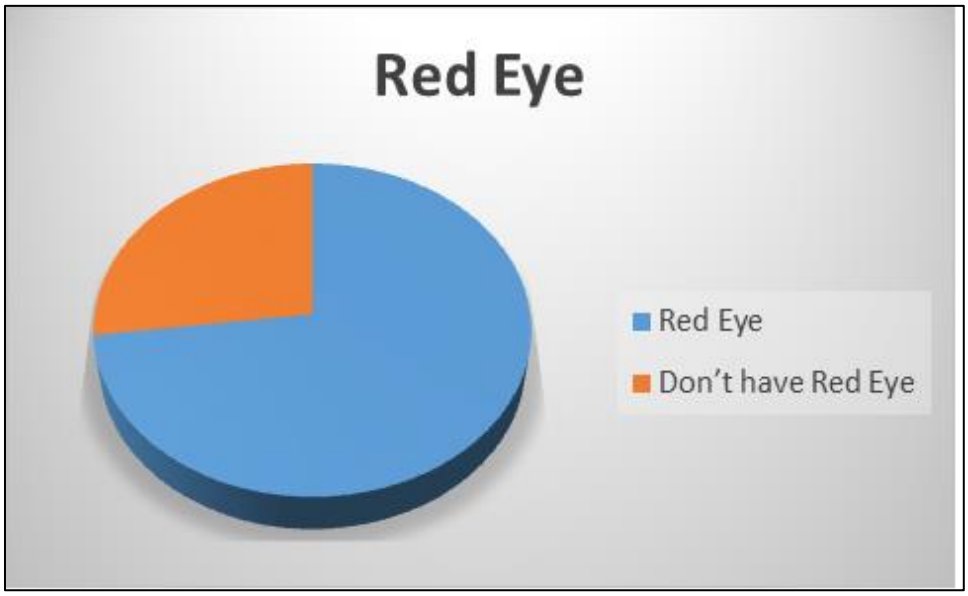

Fig (9): The proportions of people who suffer from red eye

The percentage of people who experience pain is shown in Table 11 and Figure 10. 40 of them reported having pain, or 40%, and 60 did not, or 60%. The 60% of those who did not experience pain are represented by the dark blue portion. The 40% of people who experienced pain are represented by the light portion. The percentage of those who experience pain will be the subject of the comment beneath the image; it will be finished in a second section that is not entirely displayed here.

Table (11): The proportions of people suffering from pain

Pain Group	Patients	%
Pain	40	40%
Don't have Bain	60	60%
Total	100	100%

Fig (10): The proportions of people who suffer from pain

The percentages of those who experience itching are displayed in Table 12 and Figure 11. Of those surveyed, 46 reported having itchy eyes (46%), whereas 54 reported not having itchy eyes (54%).

Table (12): The proportions of people who suffer from itching

Itching Group	Patients	%
Itchy	46	46%
Not itchy	54	54%
Total	100	100%

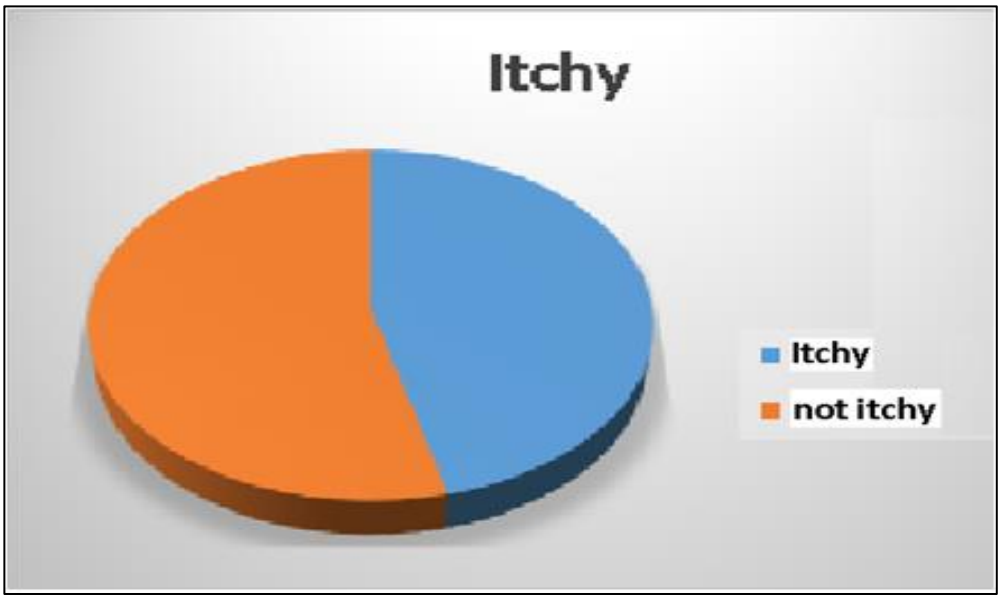

Fig (11): The proportions of people who suffer from itchy Eyes

According to Table 13 and Figure 12, 55 participants (55% of the sample) reported being smokers, while 45 participants (45%) reported being non-smokers. Light blue represents smokers, and orange represents non-smokers. This indicates that a significant proportion of the sample is more than half smokers.

Table (13): The proportions of smokers

Smokers Group	Patients	%
Smoke	55	55%
Don't Smoke	45	45%
Total	100	100%

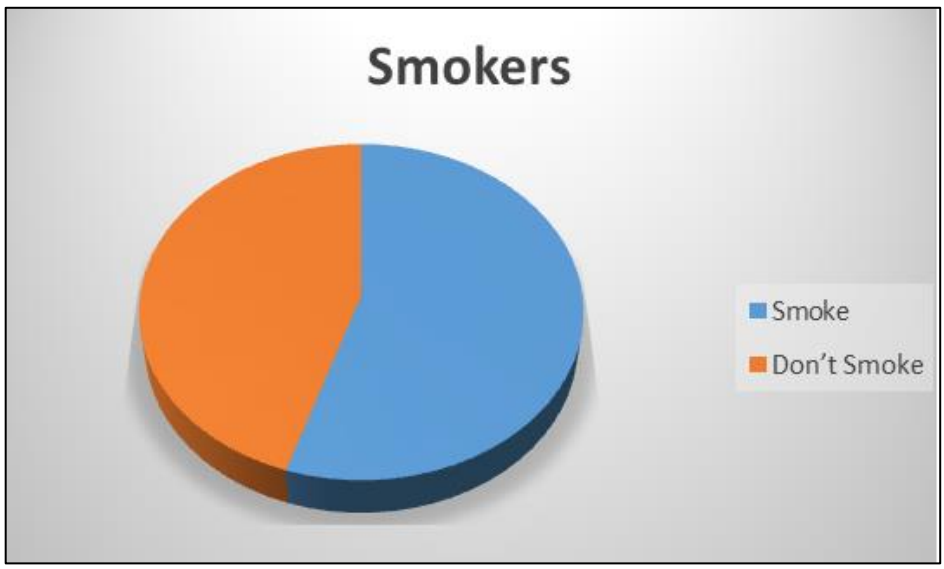

Fig (12): The proportions of smokers

The percentages of people with dry eye are shown in Table 14 and Figure 13. Orange represents 15% of people who do not have dry eye, while most do. Light blue represents 85% of those who do.

Table (14): The proportions of people suffering from dry eye

Have the Dry Eye Group	Patients	%
Have Dry eye	85	85%
Don't have dry eye	15	15%
Total	100	

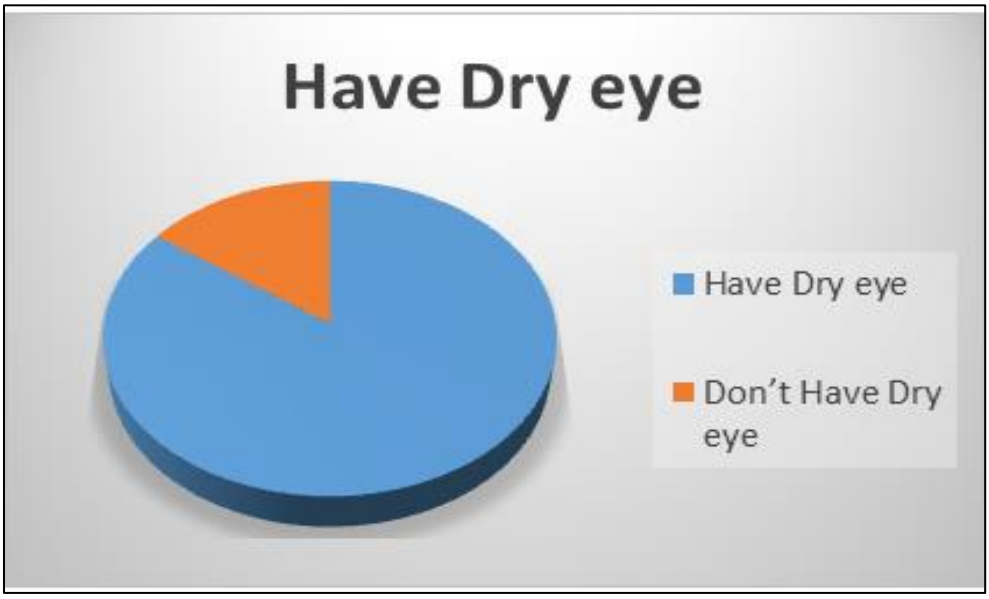

Fig (13): The proportios of people who suffer from dry eyes

The reported 85% prevalence of dry eye in the sample significantly exceeds the 32.4% observed in general student populations in arid regions like Jordan, suggesting that specific local or behavioral factors in the studied cohort such as high smoking rates sharply increase ocular surface vulnerability. Recent 2026 data confirm that symptomatic dry eye is scaling globally due to environmental stressors like dust and low humidity, which are particularly prevalent in the Iraqi university setting where this study was conducted [11,12].

The study's finding that 55% of participants are smokers is a critical indicator of risk, as 2025 research identifies smoking as a major public health concern that disrupts the oily, watery, and mucous layers of the tear film, leading to significant reductions in Schirmer test scores. While 41% of participants had chronic conditions, recent longitudinal studies suggest that systemic diseases and their associated medications, such as antihypertensives or diuretics often act as independent "iatrogenic" causes of aqueous-deficient dry eye [13].

The prevalence of headaches (75%) and blurred vision (55%) in the cohort aligns with the 2025–2026 understanding of "Digital Eye Strain," where screen exposure exceeding 7 hours daily—now a structural reality for 2025 office workers and students is an independent predictor of symptom severity. Furthermore, a massive 2022 meta-analysis updated in 2025 establishes that headaches are not just a symptom but an independent risk factor for dry eye, creating a "vicious cycle" where ocular pain and systemic neuroinflammation exacerbate one another [14].

4- CONCLUSION

The study confirms an 85% prevalence of dry eye syndrome among the cohort, strongly linked to modifiable lifestyle factors such as smoking (55%) and prolonged digital screen use. Despite the high symptom burden including headaches (75%), red eyes (73%), and blurred vision (55%), 95% of affected individuals did not seek medical care. Preventative measures, including smoking cessation, use of protective eyewear, regular eye moisturization, and reduced screen time, are essential to mitigate this condition. Urgent public health education is needed to improve awareness and early management of dry eye syndrome.

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