AWARENESS AND PRACTICES OF VISUAL HYGIENE AMONG UNIVERSITY STUDENTS

BY

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FACULTY OF OPTOMETRY

UNIVERSITY OF BENIN

BENIN CITY, EDO STATE

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CERTIFICATION

This is to certify that the project titled AWARENESS AND PRACTICES OF VISUAL HYGIENE AMONG UNDERGRADUATE UNIVERSITY STUDENTS was done by OKWUSIDI NORMAN OLAJESU from the Faculty of Optometry, University of Benin, Benin City.

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DEDICATION

This project is dedicated to **God Almighty**, whose wisdom and strength guided me throughout the course of this work, and whose grace has been sufficient for me in every step of this journey.

I also dedicate this work to my family — my mum, **Pharm. (Dr.) (Mrs.) Esther Omolayo Babatunde-Okwusidi**, my dad, **Mr. Samuel Okechukwu Okwusidi**, and my sibling, **Tracy-Joyce Okwusidi** — for their love, encouragement, and unwavering support throughout this study. I love you all immensely.

Lastly, I dedicate this work to myself — for believing, persevering, and pushing forward even when the path seemed uncertain.

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ABSTRACT

This study comprehensively examined the awareness and practice of visual hygiene among undergraduate students of the University of Benin, Benin City, with a focus on evaluating their level of knowledge, behavioural compliance, and the major barriers influencing adherence to recommended visual health practices. Employing a descriptive cross-sectional research design, data were collected from 428 undergraduate students selected across various faculties through a structured, self-administered questionnaire. The data were analyzed using descriptive and inferential statistics with the Statistical Package for the Social Sciences (SPSS) version 23.0. The findings revealed a moderate level of awareness (68.2%) regarding visual hygiene principles, as the majority of students demonstrated understanding of fundamental aspects such as adjusting screen brightness (71.3%) and using adequate lighting (65.2%). However, fewer respondents were aware of key preventive and behavioural components including maintaining correct posture (51.2%), practicing regular blinking to prevent dry eye (44.6%), undergoing routine eye examinations (33.9%), and eating a diet rich in eye-healthy nutrients (27.3%). The level of practice was also found to be low (45.6%), as most students reported spending an average of three to six hours daily on digital screens but showed poor compliance with preventive strategies such as taking regular breaks and maintaining ergonomic posture. The use of eye care services was largely reactive, with 58.0% of respondents visiting the eye clinic only when visual symptoms occurred. The study also revealed that behavioural barriers such as forgetfulness (46.7%), time constraints, and low motivation significantly hindered the consistent application of good visual hygiene practices. Furthermore, chi-square analysis indicated no statistically significant relationship between faculty of study and awareness levels ($p>0.05$), suggesting that knowledge of visual hygiene was generally uniform across disciplines. The study concludes that although undergraduate students of the University of Benin possess moderate awareness of visual hygiene, their actual practices remain inadequate, revealing a persistent knowledge–practice gap. It therefore recommends the implementation of continuous educational interventions, integration of visual hygiene modules into university curricula, and the establishment of institutional support

systems to promote preventive eye-care culture and sustainable behavioural change among students.

CHAPTER ONE

1.0 INTRODUCTION

Visual hygiene refers to practices that protect and preserve vision by promoting eye health and reducing eye strain. It encompasses a set of healthy habits and environmental adjustments aimed at minimizing visual discomfort and preventing ocular complications, especially during precision-demanding tasks such as reading, writing, and using digital screens (Sheppard and Wolffsohn, 2018). These practices include appropriate lighting, correct posture during visual tasks, regular eye examinations, adequate sleep, maintaining appropriate working distances, proper blink rates, and taking breaks during near work (Rosenfield, 2016).

The main objective of visual hygiene is to prevent or reduce symptoms of visual discomfort such as eye strain, dry eyes, headaches, blurred vision, and long-term ocular issues like myopia or computer vision syndrome (CVS). Poor visual hygiene habits have been linked to an increase in vision-related complaints in various populations (Portello et al., 2012). Despite its importance, awareness and understanding of good eye care habits remain relatively low, especially in youth and young adult demographics (Abudawood et al., 2020). This underscores the need for educational interventions, awareness campaigns, and routine assessments to evaluate current practices and promote healthier visual behaviours.

University students are particularly vulnerable to poor visual hygiene due to academic demands that require prolonged periods of reading, near work, and digital screen use. The widespread adoption of smartphones, laptops, and tablets for both academic and recreational purposes has drastically increased screen exposure among students (Mohammed et al., 2022). This has been associated with the sudden surge in digital eye strain (also known as computer vision syndrome), myopia progression, and general visual fatigue in the young adult population (Agarwal et al., 2013; Iqbal et al., 2018).

Despite the growing burden of screen-related visual complaints, awareness and proper practice of visual hygiene among undergraduate university students remain under-addressed. Many students are unaware of the preventive strategies necessary for preserving eye health, while others may be aware but fail to implement them due to lifestyle constraints, lack of motivation, or insufficient access to accurate eye care information (Agarwal *et al*., 2021).

Assessing university students' awareness and practices regarding visual hygiene is crucial and vital in identifying knowledge gaps and behavioral trends. Such data are valuable for informing institutional interventions, developing awareness programs, and designing university-based eye health initiatives aimed at improving students' visual comfort and academic performance.

1.1 BACKGROUND:

In an era defined by ubiquitous digital screens, university students are increasingly exposed to prolonged near-work and screen time, escalating the risk of digital eye strain (DES)—also known as computer vision syndrome (CVS). A pre-COVID-19 study in South Africa reported a DES prevalence of 64.24%, with students recording a median daily screen time of 13 hours during lockdown periods (Gwala et al., 2023).

In India, a survey among medical students in Junagadh, Gujarat, revealed that 89.3% experienced DES symptoms such as headaches, eye redness, and watering, yet fewer than 10% were aware of ergonomic precautions such as correct screen distance (Kumar et al., 2024). A cross-sectional study in Hyderabad (Nov–Dec 2024) showed that 100% of students owned smartphones, with the most frequently reported symptoms being headache (75%), burning or itching sensations (50%), and watering eyes (49.1%) (Ravindra et al., 2024).

Similarly, research at Imam Abdulrahman University in Saudi Arabia found that 68.53% of students had DES, with smartphone use and lack of eye lubricants identified as significant risk factors (Al-Harbi et al., 2023). Globally, the US National Institute for Occupational

Safety and Health estimates that 90% of people using computers for three or more hours daily experience CVS symptoms, while in Malaysia, prevalence among university students aged 18–25 was 89.9% (American Optometric Association, 2021; Reddy et al., 2013).

In Nigeria, although targeted studies on DES among university students are limited, there is increasing concern over the ocular impact of rising digital dependence. A nationwide survey by the Nigerian Communications Commission reported growing complaints of visual fatigue among young people, attributed to prolonged mobile and computer use (Brand Icon, 2025). A related report indicated a high incidence (82.6%) of abnormal visual acuity among frequent computer users, especially in younger populations (Vanguard, 2025).

A survey from Pune, India (Nov 2024–Apr 2025), also revealed that 37% of respondents—including many students—had dry eye symptoms, with average daily screen time ranging from 6.3 to 8.3 hours (Times of India, 2025). Moreover, a 2025 UK study reported that students averaged 6 hours 12 minutes of daily mobile use, with 68% noting a negative impact on academic performance and 47% experiencing sleep disturbances (The Times, 2025).

These statistics demonstrate that DES and related visual issues are not only widespread globally but also highly relevant to the Nigerian university context. Given the academic demands, lifestyle habits, and increasing reliance on digital devices, there is a strong rationale for assessing both awareness and practices of visual hygiene among Nigerian university students to guide targeted interventions.

1.2 STATEMENT OF PROBLEMS

In recent years, there has been a significant increase in visual demands placed on university students due to prolonged academic activities, digital screen usage, and poor sleep habits. Many students engage in extended near work with little awareness of proper visual hygiene practices. Factors such as inadequate lighting, poor diet and posture, irregular eye examinations, insufficient sleep, and failure to maintain appropriate screen distances and

blinking patterns contribute to visual fatigue and potential long-term ocular complications.Despite the rising prevalence of symptoms like eye strain, blurred vision, and headaches among students, there is limited data assessing their knowledge and implementation of good visual hygiene practices. Understanding the level of awareness and actual habits among this population is essential for guiding effective interventions to improve eye health and academic productivity.

1.3 AIMS AND OBJECTIVES

1.3.1 AIMS

The aim of this study is to assess the level of awareness and the visual hygiene practices among university students.

1.3.2 OBJECTIVES

1. To evaluate the level of awareness of visual hygiene principles and visual hygiene practices among university students.

2. To identify common barriers to adopting good visual hygiene among university students.

1.4 HYPOTHESIS

Null hypothesis: There is no significant difference between awareness and practice of visual hygiene.

Alternate hypothesis: There is a significant difference between awareness and practice of visual hygiene.

1.5 SIGNIFICANCE OF STUDY:

Prevention of Eye Strain and Fatigue: With increasing screen time and academic load, this study helps notice ways to reduce visual stress and fatigue among students.

Promotion of Long-Term Ocular Health: Proper visual hygiene habits can prevent early onset of conditions like dry eye, digital eye strain, and even myopia progression.

Enhancing Academic Performance: Visual discomfort can impair concentration and reading efficiency. This study shows a vital link between eye health and learning performance.

Creating Institutional Interventions: Results from the study can support the development of visual hygiene education programs within universities.

Providing Baseline Data: The study serves as a reference for future research, policy-making, and health promotion initiatives focused on student ocular well-being.

1.6 DEFINITION OF TERMS:

1. Visual Hygiene

A set of behavioral and environmental strategies aimed at reducing visual strain and promoting ocular health during near-vision tasks. These include appropriate lighting, blink rate maintenance, screen breaks, and ergonomic setups.

"Visual hygiene is critical for preventing visual fatigue, especially in screen-intensive environments" (American Optometric Association, 2021).

2. Eye Strain or Fatigue (Asthenopia)

A condition characterized by tiredness, discomfort, or pain in or around the eyes due to prolonged use during near tasks or screen time.

"Asthenopia is commonly reported among screen users and involves visual fatigue and related symptoms" (Sheppard & Wolffsohn, 2018).

3. Blink Rate

The frequency at which a person blinks, essential for ocular lubrication and comfort. During screen use, blink rate often decreases, leading to dry eye symptoms.

"Reduced blink rate while using screens contributes significantly to dry eye disease" (Portello et al., 2012).

4.Ergonomics

The science of designing and arranging things people use so that they interact with them efficiently and safely. In visual hygiene, this refers to ideal screen distance, height, and seating arrangement.

"Ergonomics aims to enhance comfort and reduce fatigue in users, especially during tasks requiring sustained attention" (Anshel, 2007).

5. Accommodative Stress

The strain on the eye's focusing system during prolonged near tasks, which can result in blurred vision or headache. "Sustained near work induces accommodative stress, particularly in younger individuals engaged in long study sessions" (Grosvenor, 2007)

CHAPTER TWO

2.0 LITERATURE REVIEW

The concept of visual hygiene may sound modern, but its roots go back to the earliest concerns about eye strain in relation to near work. For centuries, scholars and medical practitioners have noted that prolonged reading and poor posture could weaken the eyes and cause discomfort. What has changed, however, is the scale of the problem. Today, in an era where university students spend much of their waking life surrounded by screens, the principles of visual hygiene have become more relevant than ever before.

At the heart of visual hygiene lies the idea of behavioral and environmental adjustments designed to preserve the health of the visual system. One of the earliest and simplest principles is the Harmon distance—the recommended reading distance measured from the elbow to the knuckle. By maintaining this posture, the eyes are able to focus more comfortably and avoid unnecessary strain (Wang, 2019). Yet, even such a basic rule is often overlooked by students who hunch over laptops or balance tablets precariously on their laps, creating the perfect conditions for eye fatigue.

Posture is another critical element. An upright position, with back support, feet flat on the floor, and screens slightly below eye level, not only supports musculoskeletal health but also protects the eyes from excessive convergence stress and blurred vision. Studies have shown that students who adopt poor ergonomic setups often report higher rates of headaches and accommodative problems compared to their peers (UBC Human Resources, 2023). The story is almost always the same: in pursuit of efficiency and convenience, posture and comfort are sacrificed, and visual strain quietly sets in.

Lighting tells a similar story. In study halls, dorm rooms, and lecture theaters, students frequently struggle with glare, reflections, and dim lighting conditions that exacerbate visual discomfort. Guidelines recommend task lighting that is about three times brighter than the

surrounding ambient lighting, with light sources positioned to the side of the screen (UBC Human Resources, 2023). However, reality paints a different picture. Many students study late into the night with only the bluish glow of their devices, an environment far removed from what is considered visually healthy.

Perhaps the most widely endorsed habit in visual hygiene is the 20-20-20 rule—a simple practice of looking away from the screen every 20 minutes, focusing on an object 20 feet away, for at least 20 seconds (AOA, 2020). This tiny break gives the eyes a chance to reset and relax. Yet surveys consistently show that very few students adopt this practice, either because of lack of awareness or because academic pressure convinces them that breaks are wasted time. In fact, Mowatt, Gordon, and Santosh (2019) found that while almost 80% of students reported heavy daily screen use, fewer than 40% were even aware of basic visual hygiene principles, and fewer still actually practiced them.

The consequences of this gap in awareness are significant. Poor visual hygiene has been linked to digital eye strain (DES)—also called computer vision syndrome—marked by headaches, blurred vision, ocular discomfort, and dry eyes (Rosenfield, 2016). Among students, these symptoms are often brushed aside as temporary annoyances, yet they can signal deeper dysfunctions such as accommodative stress, convergence insufficiency, and even the progression of myopia. Wu, Huang, Yu, Fang, and Chen (2018) argue that prolonged near work and inadequate outdoor activity among young people are key drivers in the global surge of myopia. Thus, ignoring visual hygiene is not just about tolerating occasional eye strain; it may have lifelong consequences.

One striking aspect is the way students respond to these symptoms. Many resort to self-remedies—rubbing the eyes, applying cold water, or using over-the-counter drops—rather than adopting sustainable behavioral changes. Blinking patterns also change during screen use, with blink rate reduced by almost half compared to natural conditions, leading to tear

film instability and dry eye symptoms (Sheppard & Wolffsohn, 2018). Conscious blinking, adequate hydration, and the occasional use of artificial tears can mitigate these problems, but awareness of such strategies remains limited.

Research suggests that educational interventions could bridge this gap. Programs integrated into university orientation or health services have shown promise in raising awareness and shaping healthier habits (Laudon, 2023). Similarly, modifying the learning environment with ergonomic furniture, anti-glare filters, and better lighting systems can passively encourage visual hygiene. Some institutions are beginning to take these steps, but large-scale adoption is still rare, especially in low- and middle-income countries where student eye health often receives less institutional attention.

Technology itself can play a dual role. On the one hand, excessive screen time is the problem; on the other hand, technology offers solutions. Apps like f.lux adjust color temperature to match circadian rhythms, while screen timers and posture alerts nudge students to take breaks. Wearables are being developed to monitor posture and blink rate, subtly coaching users towards healthier habits. Evidence for blue-light filtering glasses remains mixed (Lin, Xu, & Wu, 2021), but many students report subjective relief when using them—highlighting that even perceived benefits can encourage compliance.

Despite these tools and strategies, barriers remain. Academic culture often glorifies long hours of study, with little tolerance for breaks. Many students view rest as laziness rather than a protective strategy, and misconceptions about digital eye strain abound (Mohan, Sen, Shah, Datt, & Jain, 2022). In this context, promoting visual hygiene is not simply about distributing guidelines but about shifting perceptions. Students need to see that protecting their vision is not a distraction from learning but an enabler of long-term academic success.

The rapid integration of digital technology into higher education has significantly transformed the academic and social lives of university students across the globe. With the

pervasive use of computers, smartphones, tablets, and other digital devices for both academic pursuits and leisure activities, concerns regarding visual hygiene have become more pressing than ever. Visual hygiene refers to a set of behavioral and environmental practices aimed at preserving comfortable and efficient visual function, reducing the risk of ocular strain, and preventing long-term eye-related complications. These practices include taking regular breaks during periods of sustained near work, ensuring proper illumination, adopting ergonomically appropriate postures, maintaining adequate viewing distances, and following well-recognized protective measures such as the 20-20-20 rule, which advises individuals to look at an object 20 feet away for at least 20 seconds after every 20 minutes of screen exposure.

Digital eye strain, often termed computer vision syndrome, has emerged as a significant public health issue in the modern digital era. As described by Rosenfield (2016), “digital eye strain has become a public health concern affecting up to 70% of individuals exposed to prolonged screen use.” University students represent a particularly high-risk group due to their heavy academic workloads, which frequently demand six to ten hours of daily screen time, compounded by additional hours of recreational screen-based activities such as gaming, social media, and online streaming. Prolonged near work without adequate preventive measures has been associated with a range of symptoms, including visual fatigue, headaches, blurred vision, ocular burning, dryness, and musculoskeletal complaints such as neck and shoulder discomfort. Reddy et al. (2013) emphasized that “prolonged near-work without adequate breaks is a significant contributor to visual fatigue and discomfort among young adults,” highlighting the urgent need to explore both the level of awareness and the extent of preventive practices among university students.

The prevalence of visual hygiene-related problems among university students has reached alarming levels worldwide. Several studies conducted in Asia, the Middle East, Europe, and Africa have reported that a substantial proportion of students experience one or more

symptoms of digital eye strain. Altalhi et al. (2020) found that more than 75% of students in their study engaged in over six hours of daily screen use, with 72% reporting frequent visual discomfort. Talens-Estarelles et al. (2022) conducted a meta-analysis and concluded that "the global prevalence of computer vision syndrome among students ranges between 64% and 90%, depending on diagnostic criteria and assessment tools used." Regional differences are noteworthy: Asian countries, where academic competition is often intense and screen-based learning is highly integrated, tend to report prevalence rates at the higher end of this spectrum, while European and North American contexts, though still significant, tend to range from 60% to 75%. African studies, though fewer in number, also report high burdens, especially in urban universities where digital adoption is rapidly increasing.

Despite these high prevalence figures, awareness of visual hygiene principles remains inconsistent and often inadequate. Many university students lack basic knowledge of preventive measures such as the 20-20-20 rule, the importance of appropriate lighting, and the necessity of routine eye examinations. Logaraj et al. (2014) reported that "only 23% of medical students surveyed were familiar with the 20-20-20 rule," and Ranasinghe et al. (2016) observed that "less than one-third of respondents practiced regular screen breaks despite experiencing symptoms." The low level of awareness is further exacerbated in non-health-related disciplines, where visual health is rarely integrated into the curriculum. Moreover, cultural and socioeconomic factors influence awareness. In low- and middle-income countries, limited access to vision care services and lack of targeted health promotion initiatives contribute to lower levels of visual hygiene literacy.

Even when awareness exists, the translation into practice is often lacking. Prolonged screen exposure without scheduled breaks remains the norm for many students. Altalhi et al. (2020) reported that "only 28% of students reported taking scheduled breaks during study sessions," and Iqbal et al. (2020) demonstrated that irregular sleep patterns increased the risk of visual

fatigue by 1.8-fold. Poor ergonomics, including close working distances, improper seating posture, and inadequate screen height adjustment, are prevalent among university populations. The widespread use of smartphones has further contributed to visual strain, as handheld devices are often used at shorter viewing distances and for extended periods. Refractive correction practices also reveal concerning patterns. Bhanderi et al. (2008) found that "a considerable number of students neglect updating their spectacles or fail to wear them consistently," which exacerbates symptoms during prolonged near work. Among contact lens users, non-compliance with basic hygiene measures remains widespread. Clayton et al. (2012) documented that "non-compliance with basic hygiene practices, such as solution replacement and avoiding overnight wear, was common among young adults," increasing the risk of discomfort, corneal complications, and microbial infections.

The negative impact of poor visual hygiene is compounded by a host of behavioral, environmental, and physiological factors. Academic pressure and long study hours often lead to reduced sleep, which has been shown to worsen ocular fatigue and tear film instability. Al Rashidi et al. (2021) reported a strong correlation between extended smartphone use and symptoms such as headaches, blurred vision, and neck strain, noting that students exceeding eight hours of daily screen time were nearly twice as likely to develop these symptoms compared to those with less than four hours of usage. Environmental contributors, including glare from digital screens, air-conditioned or low-humidity environments, and inadequate ambient lighting, further exacerbate ocular discomfort. Gender differences have also been noted, with female students frequently reporting higher rates of digital eye strain, potentially linked to hormonal influences on tear film stability and higher engagement in near work.

Good practices have been recommended globally to address these challenges and promote healthier visual habits among students. These include practicing the 20-20-20 rule consistently during study sessions; ensuring ambient lighting is balanced to reduce glare and

reflections; using anti-glare screen filters; maintaining a screen distance of approximately 50–70 cm from the eyes; keeping the top of the screen slightly below eye level; increasing font sizes to reduce squinting; and adopting proper posture with feet flat on the floor, back supported, and shoulders relaxed. Regular blinking should be consciously practiced to prevent dryness, and the use of artificial tears can help maintain tear film stability during prolonged near work. Students are also encouraged to schedule annual or biannual comprehensive eye examinations, update their refractive corrections as needed, and avoid unnecessary overuse of contact lenses. Furthermore, creating digital-free periods, especially before bedtime, and optimizing sleep hygiene can reduce cumulative eye strain. Universities are urged to provide ergonomic workstations, adjustable seating, and educational campaigns to integrate these habits into daily academic life.

Efforts to mitigate the impact of poor visual hygiene have taken various forms, including the use of blue light-filtering lenses, artificial tears, ergonomic modifications, and awareness campaigns. Blue light-filtering lenses have gained popularity among students; however, their effectiveness remains inconclusive. Lawrenson et al. (2021) stated that “while blue light filters may provide subjective relief for some individuals, evidence for their long-term effectiveness in preventing eye strain remains inconclusive.” Lubricating drops can alleviate dryness caused by reduced blinking during screen use, but they do not address the underlying behavioral causes. Educational and behavioral interventions have shown modest but meaningful results. Sheppard and Wolffsohn (2018) demonstrated that “a short educational session on the 20-20-20 rule resulted in a modest reduction in symptoms over a four-week period.” Similarly, a campus-wide program in South Korea (Kim et al., 2022) that included ergonomic improvements, awareness campaigns, and routine screenings reported a 22% reduction in computer vision syndrome symptoms after six months. Emerging digital health

interventions, such as applications that prompt screen breaks or track visual behavior, have shown potential but lack robust long-term data.

Despite the growing body of research, significant gaps remain. Longitudinal studies are scarce, and most existing research is cross-sectional, making it difficult to establish causality or track long-term benefits of interventions. There is also a lack of integration of visual hygiene education into mainstream university wellness programs, particularly outside health-related disciplines. Behavioral inertia presents a challenge: as Coles-Brennan et al. (2019) remarked, "awareness does not automatically translate into behavior change, especially in populations with high academic screen-time demands." Furthermore, few studies have explored the economic burden of poor visual hygiene on academic productivity and mental health, an area that warrants further investigation.

The evidence clearly indicates that poor visual hygiene is both highly prevalent and inadequately addressed among university students. Prevalence rates range from 60% to 85% globally, with a substantial proportion of students engaging in prolonged screen exposure without adopting effective preventive measures. The consequences extend beyond immediate ocular symptoms to include reduced academic productivity, impaired sleep, and increased risk of mental fatigue. Improving visual hygiene among university students requires a multifaceted approach. At the individual level, students must be educated about the importance of scheduled breaks, ergonomic adjustments, and routine eye examinations. At the institutional level, universities should implement structured awareness campaigns, ensure adequate ergonomic infrastructure in classrooms and libraries, and provide access to affordable vision care services. Policy-level interventions, such as integrating visual hygiene modules into student health programs and adopting digital well-being strategies, could further reinforce these efforts. Future research should focus on longitudinal evaluations of visual hygiene interventions, the cost-effectiveness of institutional programs, and the development

of innovative tools such as smart reminders and AI-driven ergonomic assessment systems to foster sustainable behavioral change. The digital transformation of education is unlikely to reverse; therefore, prioritizing visual health is essential for ensuring the academic success, well-being, and long-term ocular health of university students

CHAPTER THREE

MATERIALS AND METHODS

3.1 Study Design

This study adopted a descriptive cross-sectional study to evaluate awareness and practices of visual hygiene among university students.

A descriptive study is a type of observational research that provides a detailed account or picture of a population, event, or phenomenon as it exists at a particular point in time, without manipulating variables. Its main purpose is to describe characteristics, frequencies, trends, and relationships in a sample or population.

A cross-sectional study is an observational study design where data is collected from a population, or a representative subset, at a single specific point in time. Unlike longitudinal studies, which observe changes over time, cross-sectional studies provide a snapshot that can be used to assess the prevalence of outcomes, behaviours, or characteristics within the sample.

By employing a descriptive cross-sectional method, this study sought to gather comprehensive information on both the level of knowledge (awareness), and practice regarding visual hygiene among university students at a single point in time. This approach enables the researcher to identify prevalent habits, potential gaps in knowledge, and relationship between demographic variables and visual hygiene behaviours, providing valuable insight for targeted health education and interventions in the university setting.

3.2 Study Area

The study was conducted at University of Benin, Benin City, Edo State, which is a major institution of higher education in Nigeria. Established in 1970, the university serves as a centre of excellence, research, and community development, attracting students from across the country and internationally. This study leverages the diverse student population, academic

environment, and regional context to analyse and evaluate the knowledge and practices of visual hygiene among university students.

3.3 Study Population

The participants of this study consisted of undergraduate students of the University of Benin, Benin City. The University of Benin has 17 faculties including: Agriculture, Arts, Computer Sciences, Dentistry, Education, Engineering, Environmental Sciences, Law, Life Sciences, Medicine, Nursing, Pharmacy, Physical Sciences, Optometry, Science Laboratory Sciences, Social Sciences and Veterinary Medicine.

3.4 Sample Size

We'll use the sample size formula for estimating a proportion from Charan & Biswas (2013):

Formula:

$$n = \frac{Z^2 \times p \times (1- p)}{d^2}$$

Where:

Z = 1.96 (for 95% confidence)

anticipated prevalence of awareness or good practices

desired precision (margin of error), typically 0.05

Assumptions for study:

Since there's no existing prevalence of visual hygiene awareness in this population, we'll assume p = 0.5 (maximum variability).

Desired precision d = 0.05

Confidence level = 95%, so Z = 1.96

Put these values into formula

= 385

Minimum requirements = 385

Adjusting for Non-response (10% allowance):

n(final) = 385/0.9 ~ 428

To ensure statistical power and account for non-responses, 424 participants will be involved in the study on awareness and practices of visual hygiene. An average of 25 students were randomly selected from each faculty, which were adequate for the sample size (424).

Inclusion Criteria

1. Bona fide students of the University of Benin (UNIBEN), across all faculties aged 16 and above.

2. Students who have consented to participate in the study.

Exclusion Criteria

1. Students who decline to give informed consent.

2. Students with known visual impairment or eye diseases that may affect their visual hygiene practices.

3. Students who are currently on treatment for any ocular conditions.

4. Students who are not available during the data collection period.

3.5 Sampling Techniques

A stratified random sampling technique was used to show air representation from different faculties within the university. The population was first divided into strata based on faculties — each faculty representing one stratum. From each faculty, a number of students were randomly selected using a simple random sampling method.

3.6 Study Duration

This study lasted for 3 months.

3.7 Research Materials

1. Structured Paper Questionnaire

2. Consent Forms

3. Writing Materials

4. Data Collection Tools

5. Statistical Software: Tools such as SPSS, Microsoft Excel, or Google Sheets (used later for data entry and analysis).

3.8 Validity of the instrument

In this study, face and content validity were guaranteed.

3.9 Reliability of the instrument

The instrument underwent a pretesting process through test-retest reliability methods, and the resulting data was be analysed using IBM SPSS version 22 to determine the reliability of the test instruments with Cronbach's alpha. A pilot study was conducted with 20 students of the Federal College of Education in Edo State. The analysis revealed that a coefficient of 0.701 was sufficiently significant to start the research.

3.10 Method of Data Collection

Before data collection began, an approval letter was obtained from the school authority. The letter supported and verified the purpose of the study and officially granted permission to carry out the research within the University of Benin. It also helped the researcher gain access to the study areas and made communication with participants easier.

Data were collected using structured paper questionnaire. Participants were then approached in their various faculties within the university to obtain the responses needed. The purpose of the research was clearly explained to them, and those who showed interest were given a consent form to sign to indicate their willingness to participate.

After consent was obtained, the questionnaire was given to each participant to fill out. They completed the questionnaire themselves to ensure honest responses. Once collected, all paper questionnaires were neatly arranged and later transferred into a google form. This helped with proper organisation of the responses and made it easier to submit and store the data online for analysis.

3.11 Description of Procedure

Following the approval of the study by the appropriate school authority and the issuance of an ethical clearance letter, data were collected using a structured questionnaire designed specifically for the study. To improve convenience and increase response rate, two methods of administration were used:

1. Printed paper questionnaire
2. Online questionnaire (google form)

After data collection, all responses from the paper questionnaire were manually entered into the google form to compile the dataset in a central system.

3.12 Data Analysis

All collected questionnaires were checked thoroughly before analysis. The data from the paper-based questionnaires were manually entered into a Microsoft Excel spreadsheet and cross-verified to minimise errors. Thereafter, the full dataset, including responses from the Google form was exported into the Statistical Package for the Social Sciences (SPSS) version 23.0 for analysis.

Both descriptive and inferential statistics were employed in this study. Descriptive statistics were used to summarise and organise the data. These included frequencies and percentages for categorical variables such as gender, age group, faculty and level of study. Measures of

central tendency and dispersion, such as mean and standard deviation were used to describe continuous variation where applicable.

Inferential statistics were used to explore relationship between variables. The Chi-Square (χ^2) test of association was used to determine the relationship between selected demographic characteristics (such as faculty) and the level of awareness of visual hygiene among respondents. A confidence interval of 95% was adopted for all statistical tests. Therefore, a p-value of less than 0.05 ($p<0.05$) was considered statistically significant, indicating that the observed relationship or difference did not occur by chance.

3.13 Ethical Considerations

Ethical clearance was obtained from the Department of Research and Ethics Committee of the Faculty of Optometry from the ethics committee of the Faculty of Optometry, University of Benin, Benin City, under the tenets of the Declaration of Helsinki. This ensured that all procedures performed on each subject will not be against the public interest or inflict unnecessary harm on them. Informed consent of all participants will be obtained before any data is collected from them to ensure their full cooperation.

CHAPTER FOUR

RESULTS

A total of 428 students were interviewed in this study across the different faculties in the University of Benin, Benin City. Out of this number, 152 (35.5%) were aged between 16 and 20 years, 181 (42.3%) were aged between 21 and 25 years, 95 (22.2%) were aged 26 years and above. 220 (51.40%) were females, 208 (48.59%) were males (See Table 4.1).

Table 4.1. Demographic variables

Variable	Group	No. (%)
Age	16-20 years	152 (35.5)
	21-25 years	181 (42.3)
	26+ years	95 (22.2)
Mean age: 21.19±3.36 years		
Gender	Female	159 (37.1)
	Male	261 (61.0)
Faculty	Health-related sciences	182 (42.5)
	Physical/Life/Engineering sciences	121(28.27)
	Arts/Social Sciences	125 (29.02)

4.2 Overall awareness of visual hygiene

The level of awareness of visual hygiene amongst the respondents was moderate with 292(68.2%). See the table below.

Table 4.2: Overall awareness of visual hygiene

		Frequency	Percent
Valid	High	292	68.2
	Low	1	0.2
	Moderate	135	31.5
	Total	428	100.0

Grading system for level of awareness:

Low – 0-49%

Moderate – 50-69%

High – 70-100%

4.3 Awareness of visual hygiene practices

Table 4.3: Awareness

Practice	Aware %	Not aware %
Adjusting screen brightness	305(71.3)	123(28.7)
Taking regular breaks (e.g., 20-20-20 rule)	240(56.1)	188(43.9)
Maintaining proper screen/book distance	237(55.4)	191(44.6)
Using adequate lighting	279(65.2)	149(34.8)
Practicing good posture	219(51.2)	209(48.8)
Regular blinking to prevent dry eyes	191(44.6)	237(55.4)
Routine eye check -ups	145(33.9)	283(66.1)
Eating a diet rich in eye-healthy nutrients (e.g., vitamin A)	117(27.3)	311(72.7)

4.4 Association between faculties and level of awareness of visual hygiene amongst the students

The Faculty of Health Sciences had the highest levels of awareness with a proportion of 72% while that of Engineering and Sciences have the least level of awareness with a proportion of 62.8%. See Table 4.4 below.

Table 4.4: Association between faculties and level of awareness of visual hygiene

Faculty Group	Low Awareness (0–3) n (%)	High Awareness (4–8) n (%)	Total n (%)
Health Sciences	51 (28.0%)	131 (72.0%)	182 (100%)
Arts & Social Sciences	44 (35.2%)	81 (64.8%)	125 (100%)
Engineering & Sciences	45 (37.2%)	76 (62.8%)	121 (100%)
Total	140 (32.7%)	288 (67.3%)	428 (100%)

$\chi^2 = 3.12$, df = 2, p-value = 0.210

In order to determine if level of awareness was dependent on the Faculty, a Chi-square test of independence was performed.

The results showed that the association between Faculties and level of awareness was not dependent or statistically significant (p=0.210).

Practices that promote visual hygiene

Seven parameters were used to determine the visual hygiene practices of respondents and were placed in distribution chart.

4.5 Overall practice of visual hygiene

The level of practice of visual hygiene amongst the respondents was moderate with 195(45.6%). See the table below.

Table 4.5: Overall Practice of visual hygiene

		Frequency	Percent
Valid	High	195	45.6
	Low	68	15.9
	Moderate	165	38.6
	Total	428	100.0

Grading system for level of practice:

Low – 0-49%

Moderate – 50-69%

High – 70-100%

Based on the frequency of taking breaks from screen during near work, 36.0% of the respondents showed to take breaks every 1 hour while only 7.2% of respondents claimed to never take break from screen during near work. See Fig. 4.1 below.

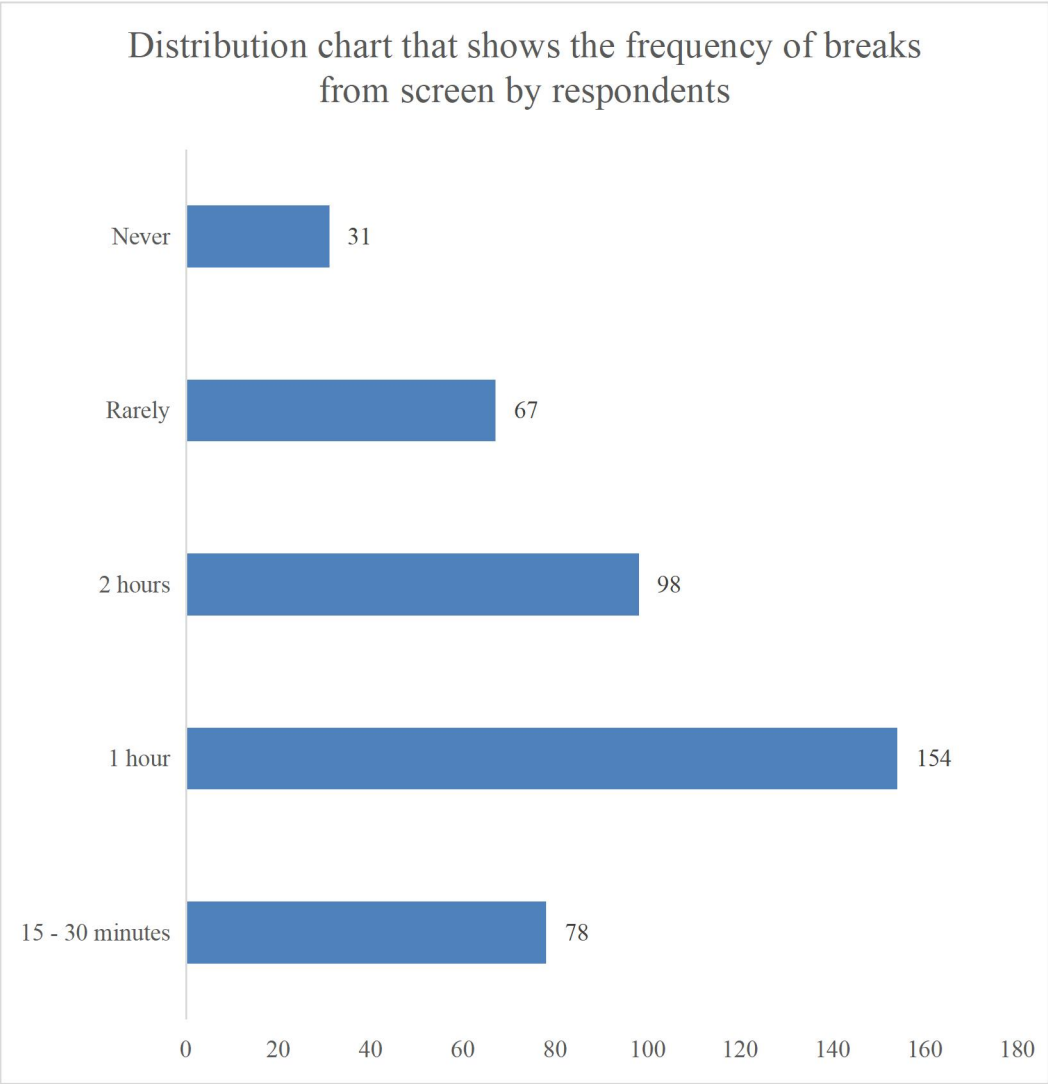

Fig. 4.1 Distribution chart that shows the frequency of breaks from screen by the respondents

Based on practices of maintaining an appropriate viewing distance, the chart showed a vast majority of respondents,63%, maintained a moderate viewing distance. See Fig. 4.2.

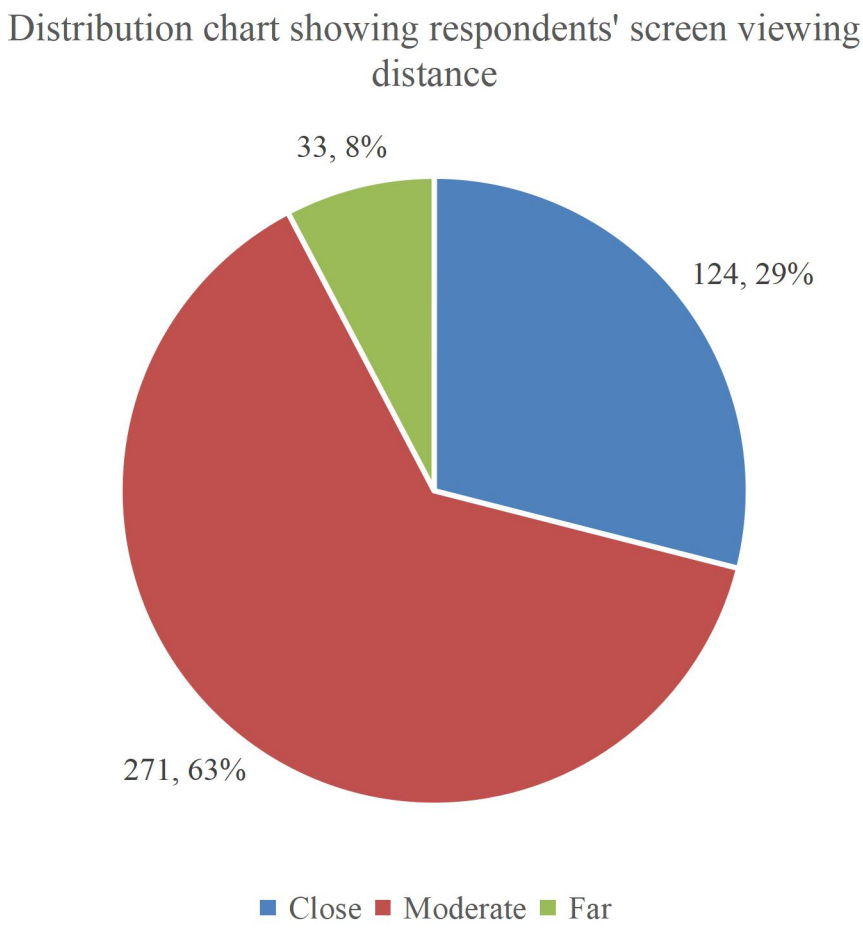

Fig. 4.2. Distribution chart showing respondents' screen viewing distance

Maintaining an upright posture is an important aspect of visual hygiene It was seen in the chart that 38.3% maintained upright posture sometimes. See Fig. 4.3 below.

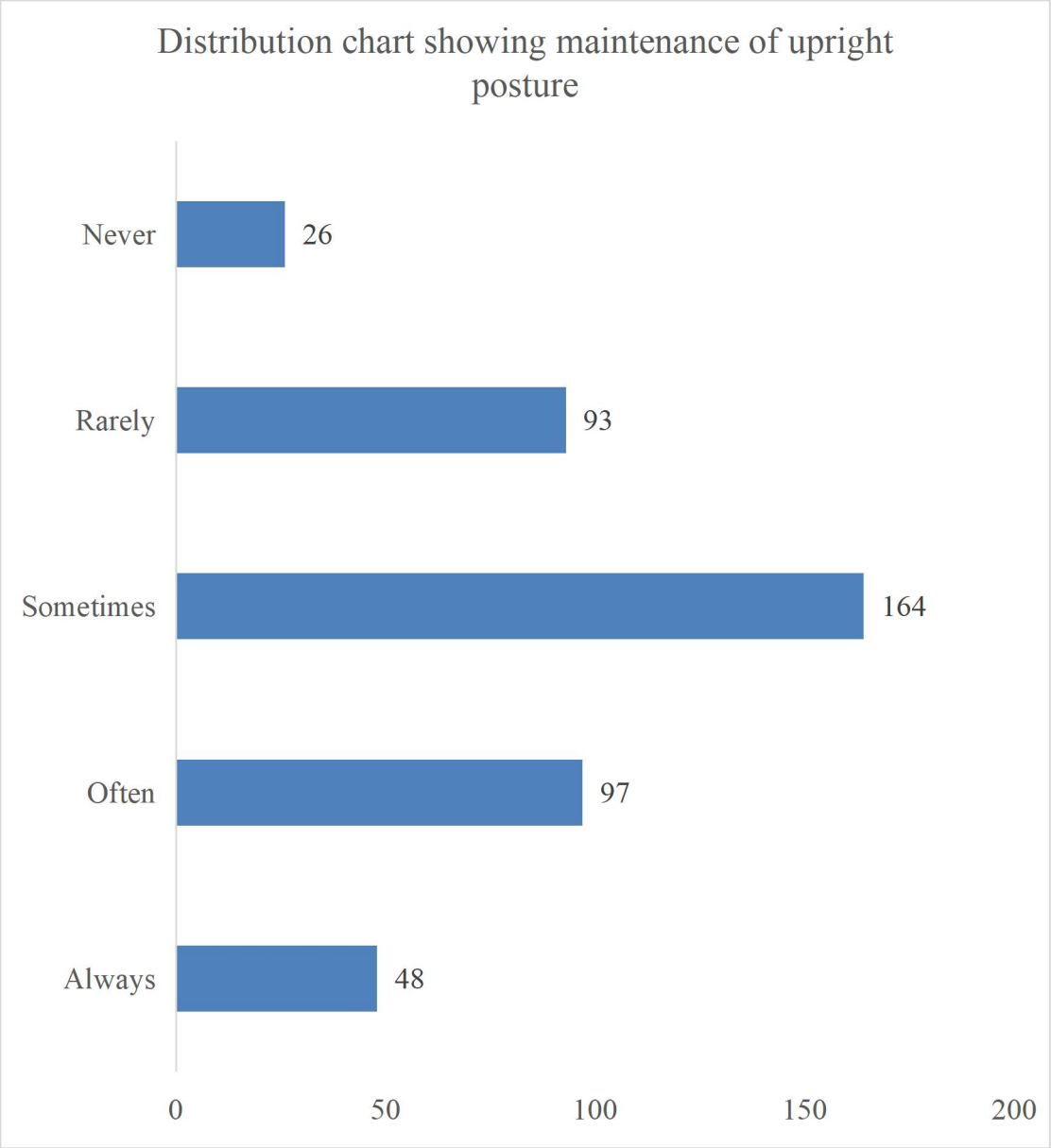

Fig. 4.3. Distribution chart showing maintenance of upright posture

Washing hands is under running water is a healthy practice which is important in maintaining a healthy visual hygiene. This chart showed that 56.0% of the respondents sometimes washed their hands. See Fig. 4.4 below.

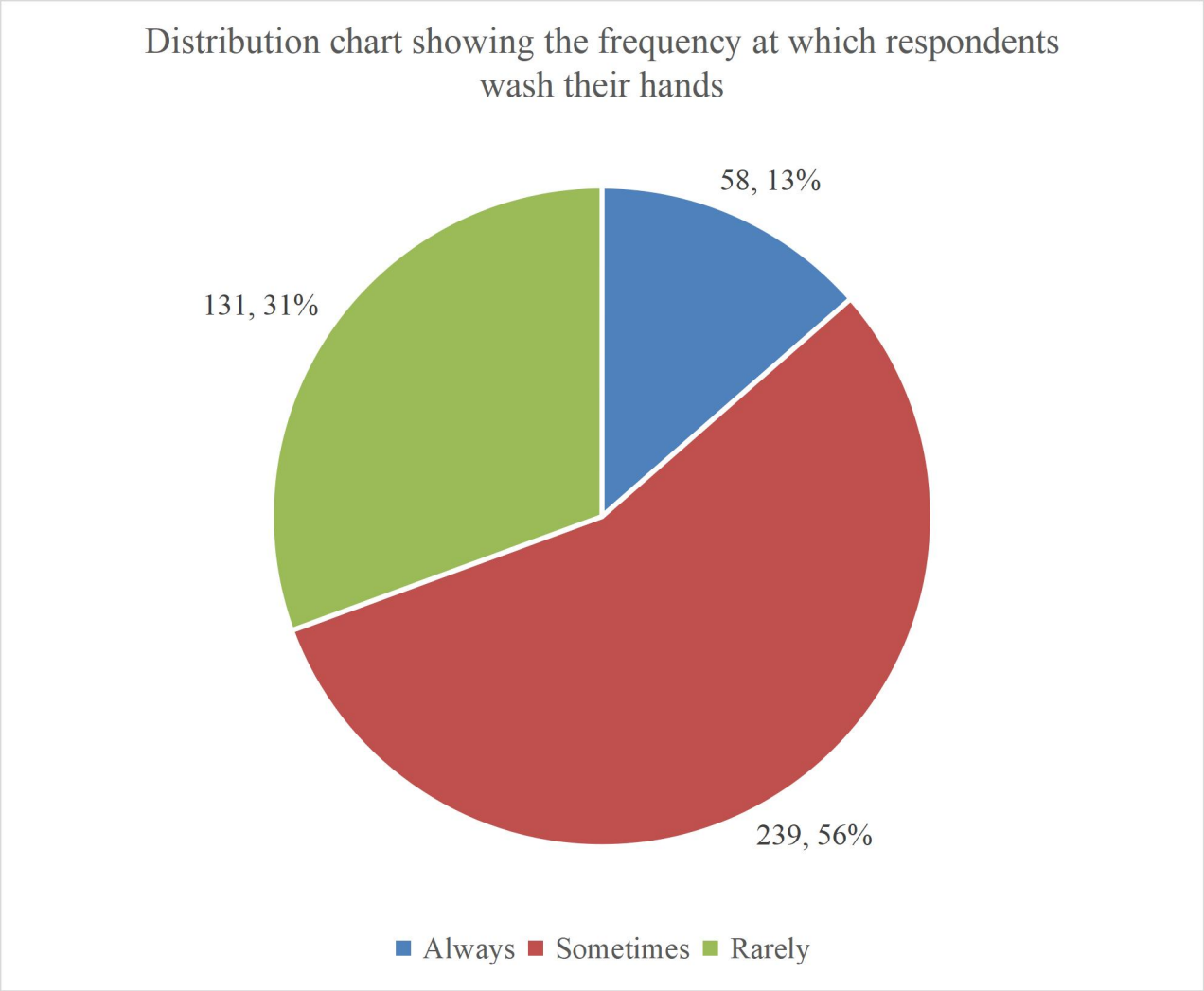

Fig. 4.4 Distribution chart showing the frequency of handwashing amongst the respondents

Sleep is a very vital practice in maintaining visual hygiene and preserving vision. It is a healthy practice as it involves resting of the visual system. The chart showed that 39.2% of the respondents slept for an average of 6-7 hours daily. See Fig. 4.5.

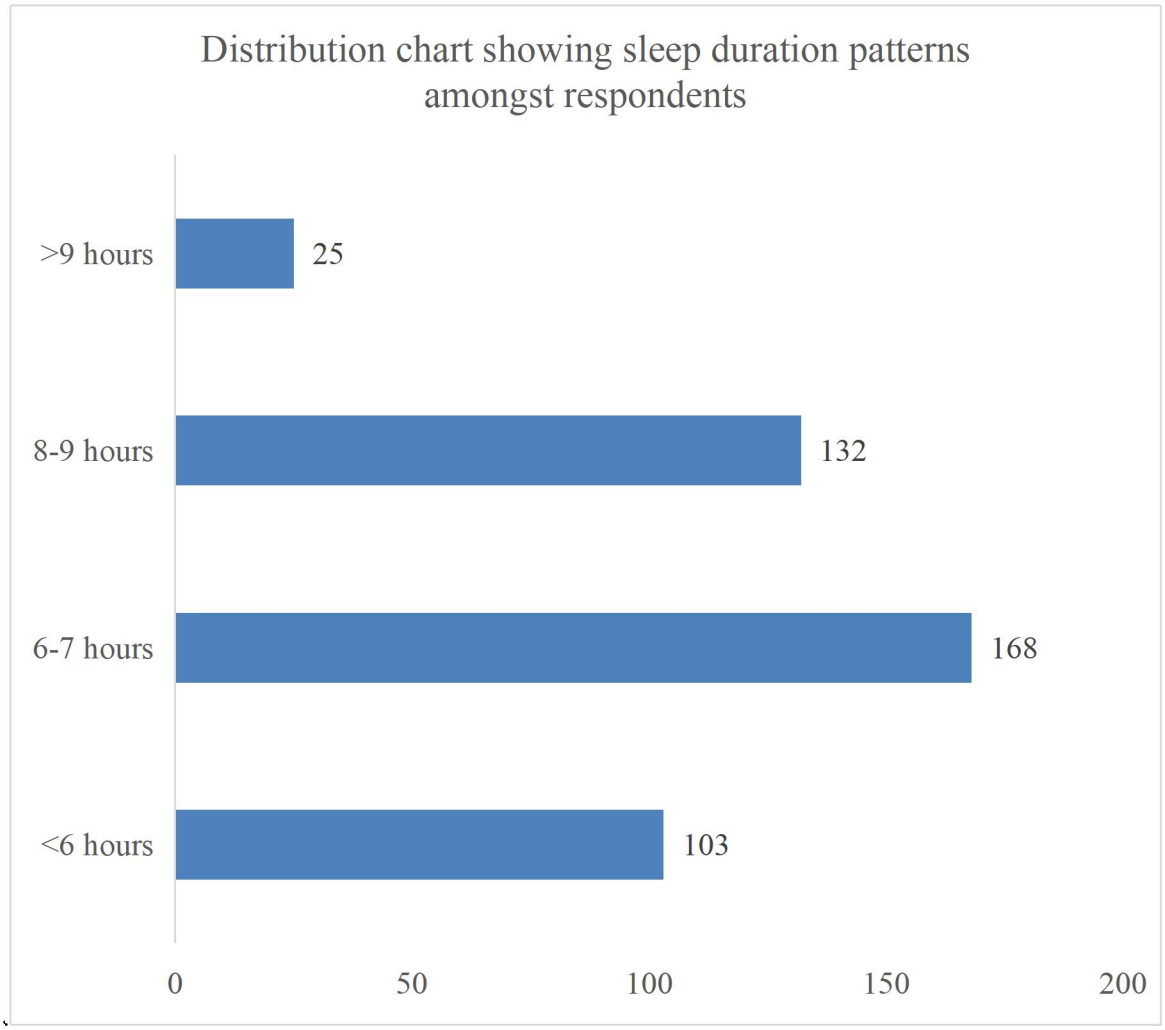

Fig. 4.5. Distribution chart showing sleep duration patterns amongst the respondents

The utilization of eye care facilities plays a crucial role in promoting and maintaining good visual hygiene. Regular eye examination enables in early detection of visual problems and helps individuals adopt proper visual hygiene habits. This chart showed that 58.0% of the respondents only visited the eye clinic when there was a problem. See Fig. 4.6.

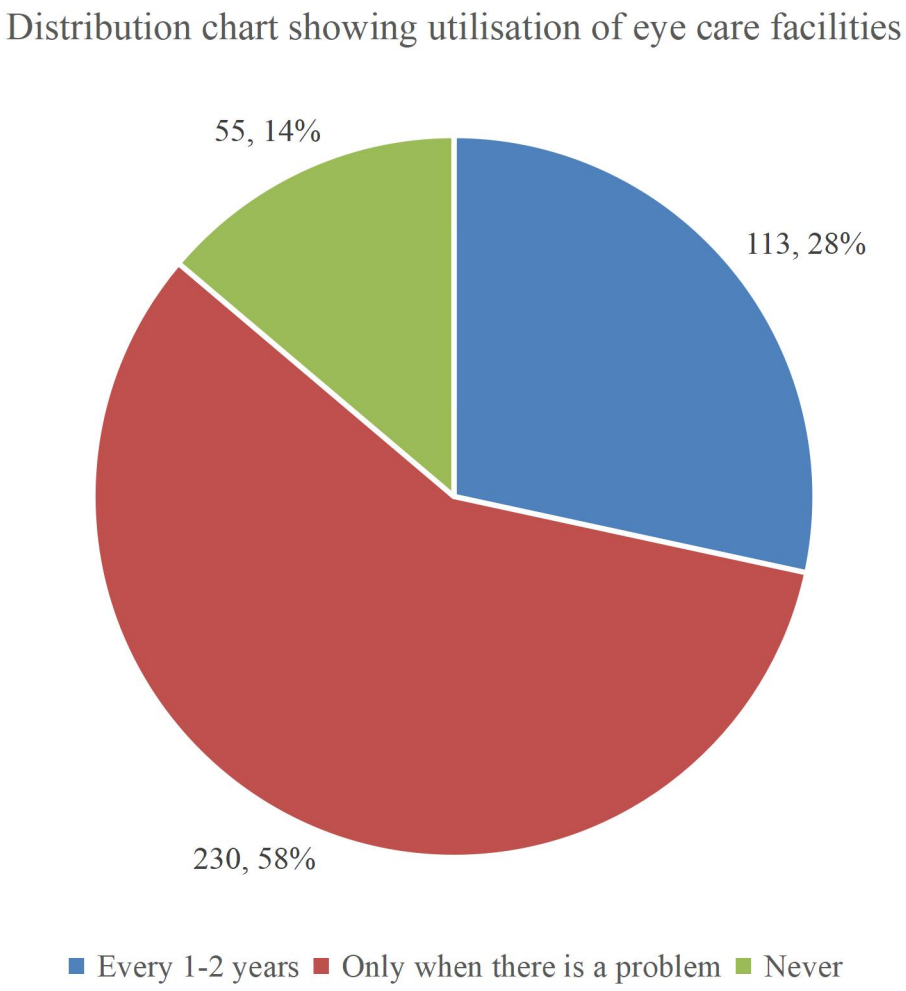

Fig. 4.6. Distribution chart showing utilisation of eye care facilities

The findings revealed that majority of the respondents spent a considerable amount each day on digital screen, with the most participants (50.5%) reported to have an average daily screen time of 3-6 hours. See Fig.4.7 below.

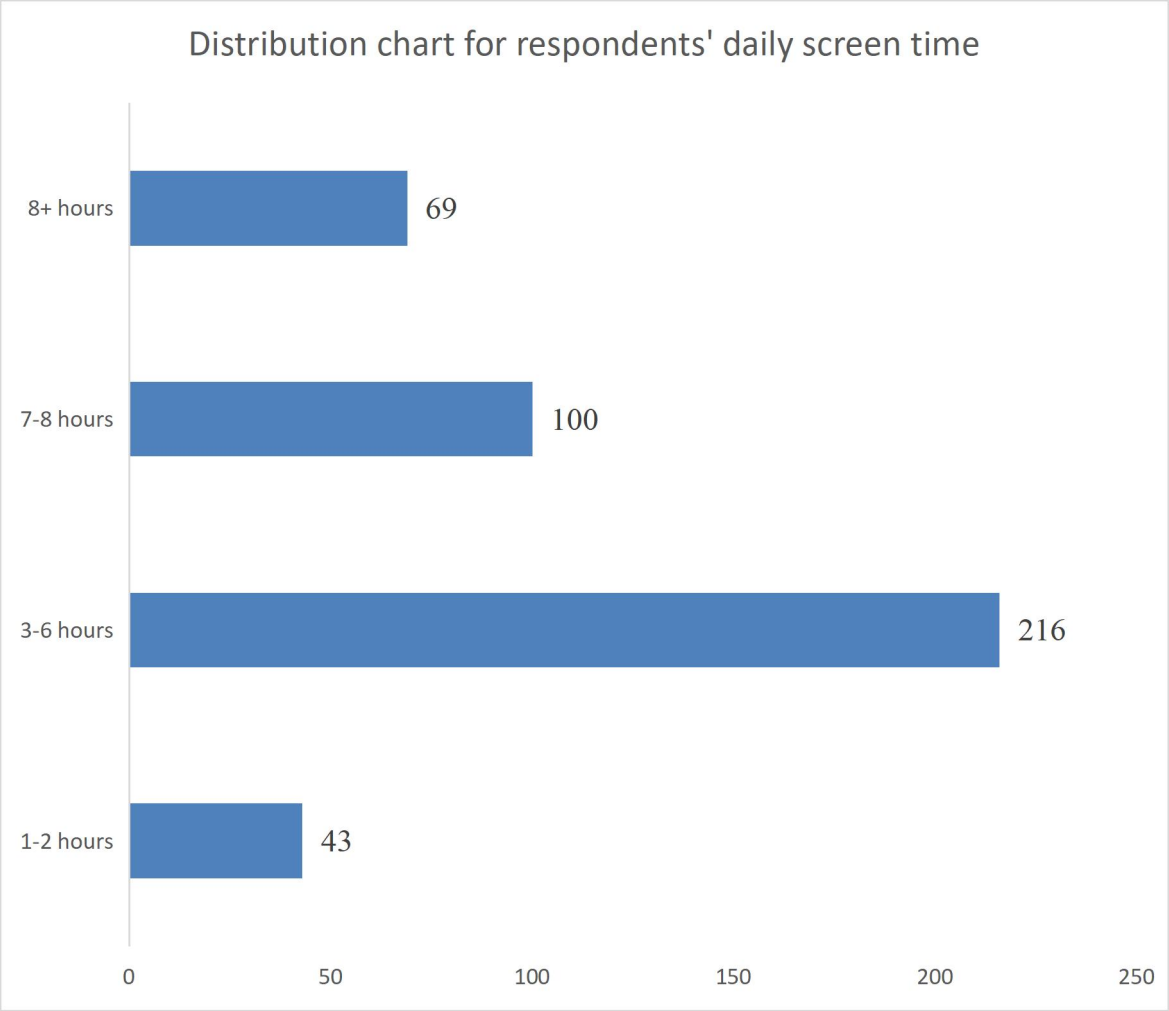

Fig. 4.7. Distribution chart for respondents' daily screen time

Barriers to visual hygiene

Despite awareness of visual hygiene practices, several factors hindered respondents from consistently applying them. Respondents identified various barriers that affected their ability to maintain good visual hygiene habits.

The most significant barrier was forgetfulness, reported by nearly half of the respondents (46.7%). See Fig. 4.8 below.

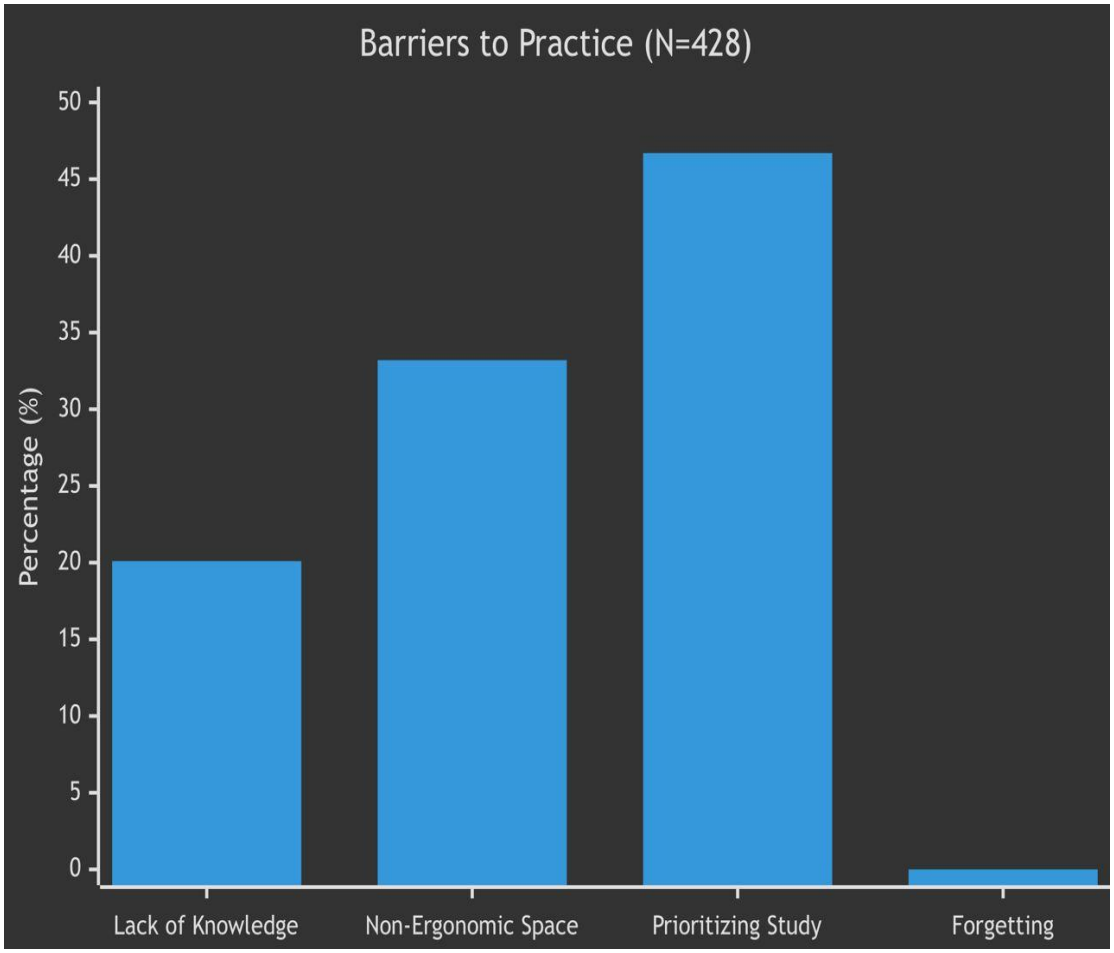

Fig. 4.8. Distribution chart showing barriers to knowledge

4.6 Relationship between the level of awareness and practices of visual hygiene

In order to determine the relationship between the level of awareness and practices, and if they were dependent on each other, Chi-square test was performed, which indicated that there was no statistically significant difference or dependence (p=0.559) between awareness and practice. See Table 4.6 below.

Table 4.6: Relationship between awareness and practice

		Practices				
		High	Moderate	Low	χ^2	p-value
Awareness	High	139	44	109	2.991	0.559
	Moderate	1	0	0		
	Low	55	24	56		
Total		195	68	165		

CHAPTER FIVE

DISCUSSION

University students, because of their high academic demands for near work, often suffer eye strain, which can be improved with proper observance of visual hygiene. In order to observe these visual hygiene practices, it is important that the students are aware firstly of these practices. In this study, the awareness and practices of visual hygiene were determined amongst university students. Of the 428 students used in this study, the level of awareness was moderate, as 68.2% of the respondents were aware of visual hygiene.

A majority (71.3%) of the respondents were aware of the importance of adjusting screen brightness, and 65.2% recognized the need for adequate lighting. However, awareness of maintaining proper viewing distance (55.4%), correct posture (51.2%), and regular blinking (44.6%) was relatively low. Awareness of the nutritional and preventive aspects of eye care was particularly poor, as only 27.3% of respondents were aware of the importance of eating a diet rich in eye-healthy nutrients, and just 33.9% were aware of the need for routine eye check-ups.

This pattern suggested that students tended to associate visual hygiene primarily with screen-based activities, neglecting its broader health dimensions such as diet and preventive eye care. Similar findings were reported by Logaraj et al. (2014) and Ranasinghe et al. (2016), who found moderate awareness of visual hygiene among university students in India and Sri Lanka. Agarwal et al. (2021) likewise observed that fewer than 40% of young adults exhibited sufficient knowledge of visual hygiene practices. The moderately higher awareness observed in this study may be attributed to the increasing prevalence of online health information and digital eye strain awareness campaigns in recent years.

This moderate level of awareness contrasts with the findings of Portello et al. (2012) and Rosenfield (2016), who reported that knowledge of this preventive rule was limited among students worldwide. The result suggested a lack of structured health education on visual hygiene in Nigerian tertiary institutions.

The relationship between faculty of study and awareness level showed that students in Health Sciences had the highest proportion of high awareness (72.0%), followed by Arts and Social Sciences (64.8%), and Engineering and Sciences (62.8%). However, this difference was not statistically significant ($p = 0.210$). This indicated that awareness of visual hygiene was not influenced by faculty. The finding agreed with Sheppard and Wolffsohn (2018), who stated that exposure to visual strain from digital devices is universal among students, regardless of academic background.

The results indicated that practice of visual hygiene was low (45.6%). More than half of the students (50.5%) reported spending between three and six hours daily on digital screens, while 10.0% spent less than two hours. This extended screen exposure reflected a growing dependence on digital devices for academic and recreational purposes. Similar trends were reported by Sheppard and Wolffsohn (2018) and Rosenfield (2016), who noted that university students commonly exceeded recommended screen-time limits, predisposing them to digital eye strain and visual fatigue.

The study showed that only 18.2% of respondents took breaks every 15-30 minutes, while 36.0% did so after one hour or longer. This finding indicated poor compliance with the recommended 20-20-20 rule and reflected a noticeable knowledge-practice gap. Ragavan et al. (2022) found comparable results, observing that even when students were aware of the benefits of screen breaks, very few practiced them consistently due to academic pressure and a lack of time management strategies.

As shown in this study, 63.0% of respondents maintained a moderate viewing distance when using digital screens. This finding suggested partial adherence to ergonomic practices, possibly guided by comfort rather than formal knowledge. Agarwal et al. (2021) reported that many users maintain moderate viewing distances intuitively without explicit awareness of ergonomic standards.

The study also showed that only 11.2% of respondents always maintained an upright posture, while 38.3% sometimes did so. The result suggested that most students adopted non-ergonomic sitting positions during prolonged near work, increasing the risk of musculoskeletal discomfort. Logaraj et al. (2014) similarly found that although students understood the benefits of proper posture, sustained adherence remained low due to convenience and prolonged study hours.

Also, 56.0% of respondents sometimes washed their hands before touching their eyes, indicating inconsistent ocular hygiene practices. This behaviour increases susceptibility to irritation and infection. Portello et al. (2012) reported similar findings, noting that despite adequate awareness of ocular hygiene, compliance was often irregular due to forgetfulness and busy schedules.

Sleep duration patterns revealed that 46.7% of students slept between six and nine hours per night, aligning with the recommendations of the American Academy of Sleep Medicine (2020). Adequate sleep has been shown to support ocular surface stability and reduce symptoms of eye strain (Sheppard and Wolffsohn, 2018). Students who slept longer may therefore have experienced fewer visual complaints.

Utilization of eye care facilities showed that 58.0% of respondents sought eye care services only when they experienced symptoms. This result reflected a reactive rather than preventive approach to eye health. Rosenfield (2016) similarly observed that young adults tend to delay

routine eye check-ups until vision problems occur, often due to time constraints or underestimation of potential risks.

Forgetfulness was reported as the most common barrier to visual hygiene (46.7%) in this study, followed by time constraints and lack of motivation. These findings indicated that behavioural rather than informational factors were the main obstacles to consistent practice. Ragavan et al. (2022) reported similar barriers among medical students, where forgetfulness, heavy study schedules, and low prioritization of self-care limited compliance with recommended visual hygiene practices.

The predominance of behavioural barriers suggested that providing information alone may not be sufficient to improve adherence. Sheppard and Wolffsohn (2018) emphasized the importance of reinforcing behavioural change through environmental and motivational strategies. In this context, interventions such as mobile reminders, peer sensitization, and visual hygiene prompts in study areas could help students remember and adopt healthy eye-care routines.

Overall, the findings demonstrated a clear knowledge-practice gap among the study population. While most respondents were aware of basic visual hygiene principles, behavioural challenges such as forgetfulness and academic demands limited consistent adherence. Addressing these challenges requires structured health promotion strategies and supportive environments that encourage the integration of visual hygiene practices into students' daily routines.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study revealed that students had moderate awareness of visual hygiene but poor practical application. While many understood basic aspects such as proper lighting and screen brightness, few practiced them consistently. Awareness of key principles like posture, preventive eye check-ups, and the 20-20-20 rule was notably low. Despite spending long hours on digital devices, most students rarely took regular screen breaks or maintained ergonomic posture. This reflects a clear knowledge–practice gap, emphasizing the need for structured eye-health education and behavioural reinforcement. The study identified forgetfulness, time constraints, and low motivation as major barriers. These challenges prevented consistent adherence to visual hygiene routines.

Non-compliance was found to stem more from behavioural habits than from lack of knowledge. The curative rather than preventive attitude toward eye care further limited healthy practices. Thus, targeted behavioural interventions are required to improve long-term visual hygiene compliance.

6.2 Recommendations

In view of the findings and conclusions drawn from this study, the following recommendations are proposed to enhance awareness, strengthen practice, and improve visual hygiene outcomes among university students and the wider community:

Policy and Institutional Level

1. Curriculum Integration: Universities, in collaboration with educational policymakers, should incorporate visual hygiene and digital eye health modules into general education and orientation programs for students across all faculties.
2. Health Education Initiatives: Institutional health services should organize periodic eye-health promotion programs, seminars, and campaigns emphasizing preventive practices such as the 20-20-20 rule, appropriate lighting, posture, and nutrition.
3. Infrastructure Enhancement: Universities should ensure that classrooms, libraries, and study spaces are equipped with ergonomic furniture and adequate lighting to minimize visual strain during academic activities.
4. Regular Eye Screening: Annual or biannual eye screening exercises should be mandated for all students to facilitate early detection of visual problems and reinforce preventive care habits.

1. Community and Research Level

5. Public Health Collaboration: Partnerships between universities and community health agencies should be established to promote awareness of digital eye strain and visual hygiene through outreach programs and social media campaigns.
6. Further Research: Future studies should explore intervention-based approaches to improve behavioural adherence, particularly the use of digital reminders, mobile health applications, and environmental cues that promote routine compliance with visual hygiene practices.

Family and Individual Level

7. Parental and Peer Involvement: Families and peer networks should encourage adherence to healthy screen-use behaviours, adequate rest, and diets rich in eye-protective nutrients.
8. Personal Accountability: Students should consciously adopt effective visual hygiene habits, including compliance with the 20-20-20 rule, maintenance of proper posture, and regular attendance at preventive eye examinations.
9. Behavioural Reinforcement: Individuals should employ self-regulatory strategies, such as mobile reminders or productivity timers, to prompt periodic visual rest and sustain consistent healthy routines.

The implementation of these recommendations across institutional, community, and individual levels would contribute significantly to improving awareness, promoting consistent visual hygiene practices, and mitigating the long-term effects of digital eye strain among university students.

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APPENDIX

QUESTIONNAIRE

INTRODUCTION

This questionnaire is designed to assess your awareness and daily habits related to visual hygiene --- that is, how you take care of your eyes during activities like reading, using your phone, or working on a computer.

Your responses will help us understand common practices and areas where eye health education may be needed.

The questionnaire is anonymous and will take just a few minutes to complete. There are no right or wrong answers --- please answer honestly based on your typical routine.

Thank you for your participation.

(Please tick or boxes and/or fill the spaces available when needed)

SECTION A: DEMOGRAPHIC INFORMATION

1. Age: 16--20 years[ ], 21--25 years[ ], 26+ years[ ],

2. Gender: Male[ ], Female[ ]

3. Faculty[ ]

Arts[ ], Education[ ], Engineering[ ], Law[ ], Medicine/Surgery[ ], Optometry[ ] Pharmacy[ ], Life Sciences[ ], Physical Sciences[ ], Basic Medical Sciences[ ], Social Sciences[ ], Agricultural Sciences[ ], Management Sciences[ ], Veterinary Medicine[ ], Dentistry/Dental Surgery[ ], Environmental Sciences[ ]

SECTION B: MEDICAL INFORMATION

4. Are you on any eye medication(s)? Yes[ ], No[ ]

5. Are you on any medication for any known health condition? Yes[ ], No[ ]

6. Do you use prescription spectacles/contact lenses ?

Yes, prescription spectacle/contact lens[ ]

No[ ]

SECTION C: AWARENESS OF VISUAL HYGIENE

7. Do you know of practices that promote good eye health? Yes [ ] No [ ]

8. Which of the following eye care practices are you aware of in reducing eye strain? (Tick please)

Practice Aware? YES Aware? NO

Adjusting screen brightness [ ] [ ]

Taking regular breaks (e.g., 20-20-20 rule) [ ] [ ]

Maintaining proper screen/book distance [ ] [ ]

Using adequate lighting [ ] [ ]

Practicing good posture [ ] [ ]

Regular blinking to prevent dry eyes [ ] [ ]

Routine eye check -ups [ ] [ ]

Eating a diet rich in eye-healthy nutrients (e.g., vitamin A) [ ] [ ]

9. Which of the following do you think negatively affect eye health? (Select all that apply)

Prolonged screen use[ ], Inadequate sleep[ ], Poor diet/nutrition[ ], Stress or fatigue[ ], Rubbing eyes excessively[ ], Lack of regular eye check-ups[ ]

10. Do you know of the 20-20-20 rule?

Yes[ ], No[ ].

SECTION D: PRACTICES

11. How frequently do you take breaks from screens to rest your eyes?

Every 15 - 30 minutes[ ], Every 1 hour[ ], Every 2 hours[ ], Rarely[ ], Never[ ]

12. On average, how many hours do you spend on digital screens daily?

About 1--2 hours[ ], About 3--6 hours[ ], About 7 - 8 hours[ ], 8+ hours[ ]

13. How close do you typically hold screens/books to your eyes?

Very close (< 25cm less than a arm's length)[ ], Moderate distance (about 25-50cm)[ ], Far (> 50cm)[ ]

14. How often do you maintain an upright posture (e.g sitting straight with device at eye level) while using screens?

Never[ ], Rarely[ ], Sometimes[ ], Often[ ], Always[ ]

15. Do you wash your hands under running water before rubbing or touching your eyes?

Yes [ ] No[ ]

16. If yes, how often?

Always[ ], Sometimes[ ], Rarely[ ], Never[ ]

17. Do you rest well (sleep) at the end of the day or during the day?

Yes [ ] No [ ]

18. If yes, how long? <6 hrs[ ], 6--7 hrs[ ], 8--9 hrs[ ], >9 hrs[ ]

SECTION E: BARRIERS, SYMPTOMS AND RECOMMENDATIONS

19. How often do you visit an eye care facility?

Every 1--2 years[ ], Only when there's a problem[ ], Never[ ]

20. How often do you experience the following symptoms after prolonged screen use? (Please rate each symptom using the scale below)

Symptoms Never Rarely Sometimes Often Always

Eye fatigue [ ] [ ] [ ] [ ] [ ]

Headaches [ ] [ ] [ ] [ ] [ ]

Blurry vision [ ] [ ] [ ] [ ] [ ]

Dry eyes [ ] [ ] [ ] [ ] [ ]

Red eye [ ] [ ] [ ] [ ] [ ]

21. What prevents you from practicing these eye care habits?

Lack of knowledge[ ], Forgetting to practice it[ ], Non - ergonomic study space[ ], Prioritizing study over eye health[ ], Other _____

22. Do you agree that these practices are important for eye health?

Strongly agree[ ], Agree[ ], Neutral[ ], Disagree[ ], Strongly disagree[ ]

23. Do you think universities should provide guidelines for eye care? Yes[ ], No[ ]

24. Would you be willing to attend awareness programs/workshops on healthy eye care practices?

Yes[ ], No[ ]

25. Which of these would help you improve your eye care habit?

Reminder apps[ ], Workshops[ ], Ergonomic study spaces[ ], Eye care screenings[ ]