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ORIGINAL STUDY

Assessing Knowledge, Attitudes, and Practices Regarding Refractive Errors and Spectacle Wear among Children in Sana'a: A Cross-Sectional Study

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ABSTRACT

Background: Understanding the knowledge, attitudes, and practices (KAP) regarding refractive errors and spectacle use is essential for promoting eye health and effective vision correction, especially in children.

Objective: This study assessed the demographic characteristics, knowledge, attitudes, and practices of participants concerning refractive errors and spectacle use, focusing on correlations influencing these factors.

Methods: A cross-sectional study of 228 participants analyzed demographic data, duration of glasses use, and responses to a structured questionnaire on KAP related to refractive errors and spectacles.

Results: Among participants, 53.1% were female, and 45.2% were aged 8–13 years. Glasses use for 1–3 years was reported by 46.1%. Most participants (91.2%) recognized the adverse effects of screen time on vision, and 83.3% valued regular eye check-ups. However, misconceptions existed, such as refractive errors being preventable by diet (43.0%). The overall knowledge was poor. Positive attitudes toward glasses were reported by 64.5%, although 81.6% sought alternatives. More than half (56.1%) rejected the notion that glasses cause bullying, and 51.8% disagreed that glasses negatively impact appearance. Adequate practices were observed in 52.6%, with 75.4% regularly visiting ophthalmologists and 81.6% recognizing the stabilizing effect of glasses on vision. However, 74.1% purchased glasses without a prescription. Knowledge positively correlated with attitudes ($r = 0.179$, $p = 0.007$) and practices ($r = 0.215$, $p = 0.001$). Participants using glasses for ≥ 3 years had significantly more positive attitudes (63.9%, $p = 0.023$) and adequate practices (77.0%, $p < 0.001$).

Conclusions: Despite moderate knowledge and practices, misconceptions about refractive errors persist, underscoring the need for educational interventions. Positive correlations between KAP suggest that enhancing knowledge can improve attitudes and practices, supporting effective spectacle use and better eye health management.

Keywords: Refractive errors, Spectacle use, Knowledge, Attitudes, Practices, Eye health

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1. Introduction

Refractive error (RE), a condition where the eye fails to properly focus light on the retina, leads to blurred vision and is among the most prevalent visual impairments globally. Uncorrected refractive error (URE) remains a significant public health issue, contributing substantially to vision impairment across all age groups [1]. According to the World Health Organization (WHO), over 2.2 billion people worldwide experience near or distance vision impairment, with nearly half of these cases being preventable or unaddressed [2].

Despite the availability of effective treatments, such as corrective spectacles, global access remains inequitable [2]. Only 36% of individuals with distance vision impairment due to RE utilize corrective spectacles, and access is particularly limited in low- and middle-income countries (LMICs), where 90% of those affected reside [3]. Factors such as socioeconomic barriers, insufficient eye care services, and cultural attitudes contribute to this disparity. For example, reluctance to wear spectacles often stems from negative perceptions held by users, parents, or communities [4, 5].

In Yemen, including Sana'a, the challenges associated with RE are compounded by limited awareness, societal stigma, and inadequate access to trained eye care professionals. Despite the inclusion of spectacles in the WHO's essential medicines list [6] and initiatives such as Vision 2020 to improve eye health in low-income settings, significant gaps remain in addressing moderate to severe visual impairment caused by uncorrected RE [7].

A study in Ethiopia found that 53.8% of participants had good knowledge and 52.1% had a favorable attitude toward refractive errors, yet many lacked awareness of definitions (38.7%), risk factors (41.7%), and symptoms (64.1%) [8]. Similarly, studies in Nairobi and Saudi Arabia reported poor public knowledge of refractive errors [9, 10]. Evidence suggests that limited knowledge, stigma, and misconceptions about refractive errors are key barriers to seeking refractive services in various countries [11, 12].

Understanding community knowledge, attitudes, and practices (KAP) is crucial for overcoming these barriers. Parents' and teachers' knowledge, for instance, plays a pivotal role in promoting early treatment for children's eye problems and fostering positive attitudes toward eye health [13, 14]. Yet, little is known about KAP of the participants in Sana'a.

This study aimed to assess KAP regarding refractive errors and corrective eyewear in Sana'a. By identifying existing perceptions, practices, and barriers, the research seeks to inform interventions that promote early detection, positive attitudes toward vision correction, and equitable access to eye care services. The findings will provide critical insights to guide local health authorities in developing targeted programs and policies tailored to the community's needs.

2. Methods

2.1. Study design and setting

This study is a health facility-based, descriptive cross-sectional survey conducted in Sana'a, Yemen, from October 2023 to February 2024. Data were collected from 228 children and their relatives who attended three eye care facilities: Magrabi Hospital, Rowad Al Noor Eye Center, and Albarrag Eye Center. These centers were selected since they are the major referral centers in Sana'a, catering to diverse patient populations, thus providing a representative sample of individuals with refractive errors.

2.2. Inclusion and exclusion criteria

Inclusion criteria: Children aged 1 to 17 years who had worn glasses for at least one month.

Exclusion criteria: Children wearing glasses for the first time and individuals aged 18 years or older.

2.3. Sample size calculation

Previous studies in Saudi Arabia estimated the prevalence of childhood refractive errors at 13.7% in Al Hassa and 16.3% in the Qassim region [15]. Taking the average of these two studies (15%) as the expected prevalence, the required sample size was calculated using the following formula (1) [16]:

$$n = \frac{Z^2\ P\ (1-P)}{d^2} \tag{1}$$

Where:

- n = Required sample size
- Z = Z-score corresponding to the desired confidence level (1.96 for 95% confidence)
- p = Expected prevalence (15%)
- d = Precision or margin of error (typically 5%, or 0.05)

$$n = \frac{(1.96)^2\ 0.15\ (1-0.15)}{(0.05)^2} = 196\ participants \tag{2}$$

Therefore, the minimum required sample size for this study is 196 participants. Data collection was utilized convenience sampling method.

2.4. Study tool

A structured questionnaire was developed based on a review of similar studies [17–19] and validated by a panel of eye care professionals, including optometrists and ophthalmologists. Feedback from the panel was incorporated to refine the questionnaire. To ensure linguistic accuracy and cultural appropriateness, the questionnaire was translated from English to Arabic and then back-translated into English by a language expert. Any discrepancies between the two versions were reviewed and reconciled by an ophthalmologist.

The final questionnaire consisted of four sections. The first section collected socio-demographic information, including age, gender, and duration of glasses use. The second section, comprising nine questions, assessed participants' knowledge of refractive errors, the effects of spectacles, and the impact of lifestyle choices on vision. The third section, with seven questions, explored attitudes toward spectacle use, including perceptions of bullying and social implications. The fourth section, containing four questions, evaluated participants' practices regarding vision care, regular eye check-ups, and adherence to spectacle use.

2.5. Data collection

This study employed a structured questionnaire to assess participants' knowledge, attitudes, and practices (KAP) regarding refractive errors and spectacle use. The questionnaire included closed-ended questions with response options of "Yes," "No," and "I don't know," covering three domains: knowledge (factual questions about refractive errors and glasses), attitudes (perceptions and beliefs about spectacle use), and practices (self-reported behaviors related to vision care and glasses use). Participants were recruited from a representative sample spanning various age groups, with parents assisting in responses for children when necessary. Data were collected through face-to-face interviews conducted by three ophthalmologists. Prior to data collection, the ophthalmologists held a meeting to review and discuss the questionnaire items, ensuring uniformity in the data collection process. The interviews were carried out at three prominent eye care facilities in Sana'a: Magrabi Hospital, Rowad Al Noor Eye Center, and Albarrag Eye Cente. Parents assisted in obtaining responses from younger children, especially those under 10 years of age.

2.6. Scoring system

Knowledge was assessed through nine questions, with each correct answer (Yes) receiving a score of 1, and each incorrect or uncertain answer (No or "I don't know") receiving a score of 0. The knowledge levels were categorized as follows: Poor knowledge (scores ranging from 1 to 5 points, 25th percentile), moderate knowledge (score of 6 points, 50th percentile), and good knowledge (scores between 7 and 9 points, 75th percentile) [20].

Attitudes were evaluated using seven questions, with a score of 1 assigned for a positive attitude and a score of 0 for a negative attitude. The first quartile (25th percentile) of the total attitude scores was used to define the cutoff point for classification. Participants with scores less than or equal to the first quartile were categorized as having a negative attitude, while those with scores greater than the first quartile were classified as having a positive attitude.

Practice was assessed using a series of questions, each scored as 1 for adequate practice and 0 for inadequate practice. The total practice score was calculated, and based on the first quartile (25th percentile, with a score of 2), practice was classified as inadequate for scores less than or equal to 2, and adequate for scores greater than 2 [20].

2.7. Ethical considerations

Ethical approval for this study was granted by the Ethical Committee at the University of Science and Technology, under the reference number 1446/0000/UREC/UST. Written informed consent was obtained from all participants, as well as from their guardians for minors. To ensure privacy and confidentiality, participants' personal information was securely stored, and only aggregated data were used for analysis. The study adhered to all ethical guidelines to protect the rights and welfare of participants.

2.8. Statistical analysis

Data were imported into SPSS Version 27.0 (IBM Corp., Armonk, NY, USA) for statistical analysis. Descriptive statistics, including frequencies and percentages, were used to summarize socio-demographic characteristics such as age, gender, and duration of glasses use. Knowledge was assessed and classified based on scores, using the 25th, 50th, and 75th percentiles as thresholds. Poor knowledge was defined as a score of 0–5 (25th percentile), moderate knowledge as a score of 6 (50th percentile), and good knowledge as a score of 7–9 (75th percentile). Attitudes were

Table 1. Demographic characteristics of participants and duration of glasses use.

	Frequency	(%)
Gender		
Male	107	(46.9)
Female	121	(53.1)
Age		
≤7	66	(28.9)
8–13	103	(45.2)
≥14	59	(25.9)
Duration		
<1 year	62	(27.2)
1–3	105	(46.1)
>3	61	(26.8)

classified as positive if they were greater than the 25th percentile, and negative if they were equal to or less than the 25th percentile. Practices were categorized as adequate if they were greater than the 25th percentile, and inadequate if they were equal to or less than the 25th percentile.

Chi-square tests were conducted to assess the relationship between categorical variables such as gender, age, and duration of glasses use with knowledge, attitude, and practice. Spearman's correlation analysis was used to assess the correlations between knowledge, attitude, and practice. A p-value of <0.05 was considered statistically significant for all analyses.

3. Results

3.1. Demographic characteristics of the participants and the duration of glasses use

Table 1 presents the demographic characteristics of the participants and the duration of glasses use. Among the 228 participants, 53.1% (n = 121) were female and 46.9% (n = 107) were male. Most participants were aged 8–13 years, accounting for 45.2% (n = 103), followed by those aged ≤7 years at 28.9% (n = 66) and ≥14 years at 25.9% (n = 59). In terms of the duration of glasses use, 46.1% (n = 105) reported using glasses for 1–3 years, 27.2% (n = 62) for less than 1 year, and 26.8% (n = 61) for more than 3 years.

3.2. Participants' knowledge about refractive errors and glass use

Table 2 highlights participants' knowledge about refractive errors and spectacle use. A large majority of participants (91.2%, n = 208) believed that screen time, such as using phones or watching TV, negatively affects visual acuity, and 83.3% (n = 190) agreed that children should have regular eye check-ups. Additionally, 78.1% (n = 178) recognized that wearing glasses regularly could alleviate symptoms like headaches or tearing. Furthermore, 64.5% (n = 147) disagreed with the idea that wearing glasses worsens vision, and 62.7% (n = 143) acknowledged that wearing glasses improves vision and were aware of refractive errors. Over half (51.8%, n = 118) believed that children's vision improves after wearing glasses. However, fewer participants believed that refractive errors are inherited (43.4%, n = 99) or that poor vision can be prevented with certain foods (43.0%, n = 98). Overall, 38.6% (n = 88) of participants demonstrated poor knowledge, 26.3% (n = 60) had moderate knowledge, and 35.1% (n = 80) exhibited good knowledge.

3.3. Participants' attitudes toward glasses use

Table 3 reveals participants' attitudes toward glasses use. The majority of participants (64.5%, n = 147) expressed a positive attitude toward wearing glasses, while 35.5% (n = 81) had a negative view. However, a significant portion (81.6%, n = 186) was seeking alternatives to glasses, and 73.7% (n = 168) did not believe wearing glasses would make their child dependent on them. Regarding the social impact, 56.1% (n = 128) reported that children did not experience bullying due to wearing glasses, and 51.8% (n = 118) did not think glasses negatively affected appearance. In contrast, 69.3% (n = 158) disagreed with the idea that children who wear glasses are smarter, and 54.4% (n = 124) felt that glasses restricted activities. Overall, 56.6% (n = 129) of the participants exhibited a positive attitude toward glasses use.

3.4. Participants' practices regarding glass use

Table 4 presents the participants' practices regarding spectacles and eye care. Most participants reported adequate practices, with 81.6% (n = 186) telling their child that wearing glasses stabilizes vision, and 75.4% (n = 172) visiting an ophthalmologist regularly. However, a significant portion (74.1%, n = 169) purchased glasses without a prescription from an optical shop. In terms of consistent use, 64.0% (n = 146) of participants ensured their child wore glasses consistently, while 36.0% (n = 82) did not. Overall, 52.6% (n = 120) of participants displayed adequate practices, though areas such as purchasing glasses without a prescription and ensuring consistent use of glasses could be improved.

Table 2. Participants' correct responses on knowledge about refractive errors and glasses use.

Question		Frequency	(%)
Do you think refractive errors are inherited?		99	(43.4)
Do you believe poor vision can be prevented with certain foods?		98	(43.0)
Do you think wearing glasses worsens vision?		147	(64.5)
Have you heard of refractive errors?		143	(62.7)
Do you think wearing glasses improves vision?		143	(62.7)
Does your child's vision improve after wearing glasses?		118	(51.8)
Do you believe wearing glasses regularly can alleviate symptoms like headaches or tearing?		178	(78.1)
Do you think screen time (phones, TV) affects visual acuity?		208	(91.2)
Do you think children should have regular eye check-ups?		190	(83.3)
Overall knowledge	Poor knowledge	88	(38.6)
	Moderate knowledge	60	(26.3)
	Good knowledge	80	(35.1)

Table 3. Participants' attitudes toward glasses use.

Question	Item	Frequency	(%)
Are you with wearing glasses?			
Negative attitude	Item 1	81	(35.5)
Positive attitude		147	(64.5)
Are you seeking alternatives to glasses?			
Negative attitude	Item 2	186	(81.6)
Positive attitude		42	(18.4)
Do you think wearing glasses will make your child dependent on them?			
Negative attitude	Item 3	168	(73.7)
Positive attitude		60	(26.3)
Does your child experience bullying due to wearing glasses?			
Negative attitude	Item 4	128	(56.1)
Positive attitude		100	(43.9)
Do you believe glasses negatively impact appearance?			
Negative attitude	Item 5	118	(51.8)
Positive attitude		110	(48.2)
Do you think children wearing glasses are smarter than others?			
Negative attitude	Item 6	158	(69.3)
Positive attitude		70	(30.7)
Do you feel that glasses restrict activities?			
Negative attitude	Item 7	124	(54.4)
Positive attitude		104	(45.6)
Overall attitude	Negative attitude	99	(43.4)
	Positive attitude	129	(56.6)

Note: A "Yes" response was considered a positive attitude for Item 1, while a "No" response was considered a positive attitude for Items 2–7.

Table 4. Participants' practices regarding glasses use and eye care.

Question		Frequency	(%)
Do you tell your child that wearing glasses stabilizes vision?			
Inadequate practice	Item 1	42	(18.4)
Adequate Practice		186	(81.6)
Have you taken glasses based on prescription from an optical shop?			
Inadequate practice	Item 2	169	(74.1)
Adequate Practice		59	(25.9)
Do you visit an ophthalmologist regularly?			
Inadequate practice	Item 3	56	(24.6)
Adequate Practice		172	(75.4)
Does your child wear glass consistently?			
Inadequate practice	Item 4	82	(36.0)
Adequate Practice		146	(64.0)
Overall practice			
Inadequate practice		108	(47.4)
Adequate practice		120	(52.6)

Note: A "Yes" response was considered an indication of adequate practice for all items.

Table 5. Association between demographic factors and participants' knowledge, attitudes, and practices refractive errors and glasses use.

	Knowledge			Attitude		Practice	
	Poor knowledge	Moderate knowledge	Good knowledge	Negative attitude	Positive attitude	Inadequate practice	Adequate practice
	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
Gender							
Male	40(37.4)	31(29.0)	36(33.6)	47(43.9)	60(56.1)	47(43.9)	60(56.1)
Female	48 (39.7)	29(24.0)	44(36.4)	52(43.0)	69(57.0)	61(50.4)	60(49.6)
χ^2, p-value	0.732, 0.692	0.021, 0.885	0.959, 0.327				
Age							
≤7	26(39.4)	17(25.8)	23(34.8)	21(31.8)	45(68.2)	33(50.0)	33(50.0)
8–13	42(40.8)	31(30.1)	30(29.1)	52(50.5)	51(49.5)	51(49.5)	52(50.5)
≥14	20(33.9)	12(20.3)	27(45.8)	26(44.1)	33(55.9)	24(40.7)	35(59.3)
χ^2, p-value	4.804, 0.308	5.719, 0.057	1.433, 0.488				
Duration							
<1 year	23(37.1)	20(32.3)	19(30.6)	36(58.1)	26(41.9)	30(48.4)	32(51.6)
1–3	40(38.1)	26(24.8)	39(37.1)	41(39.0)	64(61.0)	64(61.0)	41(39.0)
>3	25(41.0)	14(23.0)	22(36.1)	22(36.1)	39(63.9)	14(23.0)	47(77.0)
χ^2, p-value	1.816, 0.770			7.572, 0.023*		22.386, <0.001*	

Note: Bold text and an asterisk (*) indicate a significant association. The Chi-square test was used to assess associations in the table.

3.5. Association between participants' knowledge, attitudes, practices, and glasses use

Table 5 presents the association between participants' knowledge, attitudes, practices, and glasses use. A significant association was found between the duration of wearing glasses and participants' attitudes and practices regarding refractive errors and glasses use. Specifically, participants who had been wearing glasses for more than three years had a significantly higher proportion of positive attitudes (63.9%, $p = 0.023$) and adequate practices (77.0%, $p < 0.001$) compared to those with shorter durations of use. In contrast, no significant association was observed between demographic factors, such as gender and age, and knowledge or attitudes toward refractive errors and glasses use. Although there were slight variations in the distribution of knowledge levels by age and gender, these differences were not statistically significant.

3.6. Correlation between knowledge, attitude, and practice of glass use

Table 6 shows the correlation between knowledge, attitude, and practice regarding Glasses use. A significant positive correlation between knowledge and both attitude and practice regarding refractive errors and glasses use. The correlation coefficient between knowledge and attitude is a weak positive correlation ($r = 0.179$, $p = 0.007$), indicating that as participants' knowledge about refractive errors increases, their positive attitude toward glasses use also tends to improve. Similarly, there is a weak positive correlation between knowledge and practice, with a correlation coefficient of 0.215 ($p = 0.001$), suggesting that greater knowledge is associated with better practices related to refractive errors and glasses use. The scatter plots (Figs. 1 and 2) show that knowledge explains 8.7% of the variance in attitude ($R^2 = 0.087$) and 4.2% in practice ($R^2 = 0.042$).

Table 6. Correlation between knowledge, attitude, and practice regarding refractive errors and glasses use.

	Attitude	Practice
Knowledge		
Correlation Coefficient[a]	0.179**	0.215**
P value	0.007*	0.001*
N	228	228

Note: Spearman's correlation coefficient; star sign and bold text indicate significant correlation.

4. Discussion

This study aimed to assess participants' knowledge, attitudes, and practices (KAP) regarding refractive errors and the use of glasses. The results indicate that while most participants demonstrated a basic understanding of refractive errors, significant gaps in knowledge remain, particularly concerning more specific aspects such as inheritance patterns and the role of nutrition in visual health. Nevertheless, the majority recognized the importance of wearing glasses and acknowledged the potential negative impact of excessive screen time on visual acuity. Furthermore, we

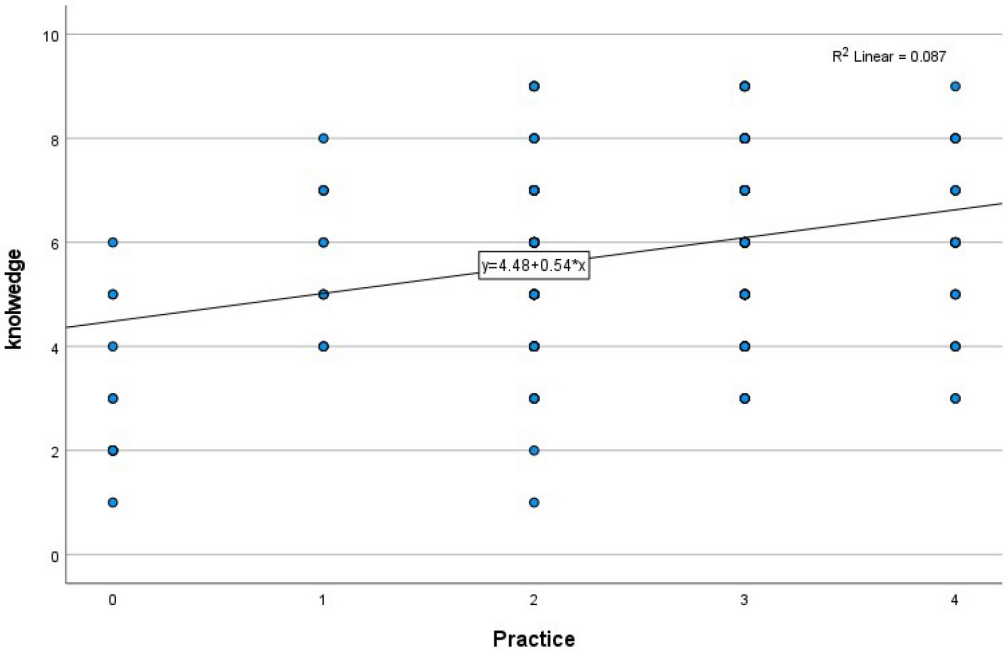

Fig. 1. Correlation between knowledge and practice.

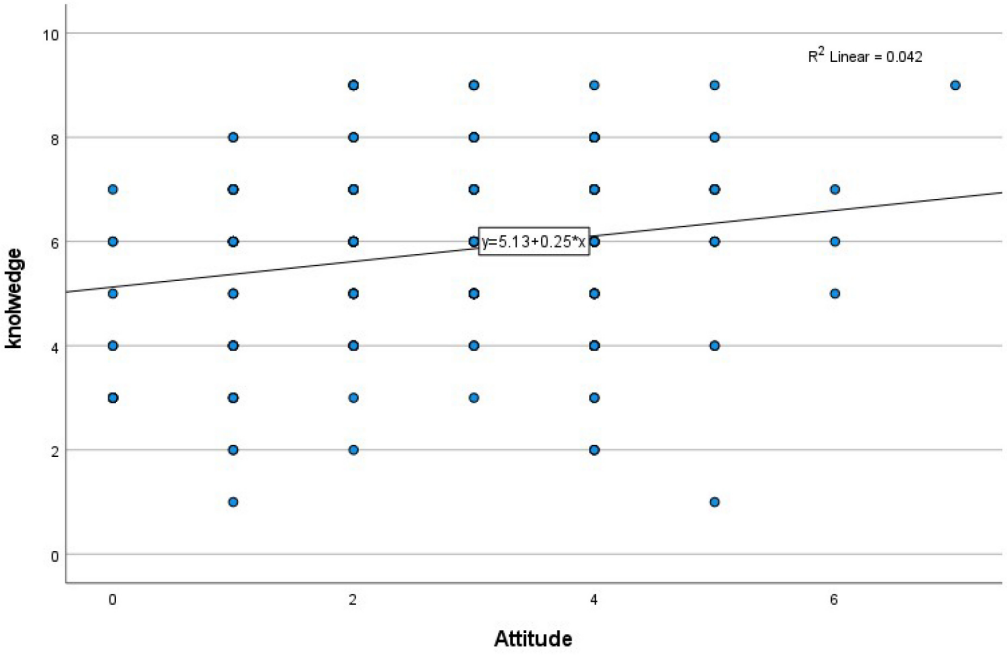

Fig. 2. Correlation between knowledge and attitude.

found that the duration of glasses use was positively correlated with more favorable attitudes and better adherence to wearing glasses.

Regarding knowledge, 35.1% of participants exhibited good knowledge about refractive errors and glasses, a finding consistent with a study in South Ethiopia, where 32.6% of adults had good knowledge [21]. However, a higher proportion (90.6%) of adults in Ethiopia showed adequate knowledge about spectacles [22], highlighting regional differences in awareness.

In this study, 62.7% of participants believed that wearing glasses improves vision, consistent with findings from Nairobi County, where 61.2% of public

high school students acknowledged spectacles as a common method for correcting poor vision [9]. Similar studies from Southeast Nigeria (60.3%) and India (85%) also reported high awareness regarding the benefits of spectacles [23, 24], while a study in Saudi Arabia reported only 43% belief in their efficacy [25]. These disparities could be attributed to differences in public health initiatives, cultural factors, or access to eye care services.

Moreover, 64.5% of participants disagreed with the belief that wearing glasses worsens vision, a finding similar to Christina et al. [24], where 77% disagreed. However, despite this high level of awareness, 91.2% of participants acknowledged the negative impact of screen time on visual health, which contrasts with a South African study where only 63% of university students identified digital devices as a primary cause of poor vision [17]. The discrepancy may reflect differences in exposure to digital screens or variations in public health messaging across populations.

The study also highlighted a positive attitude towards wearing glasses, with 56.6% of participants expressing favorable views. This is consistent with several studies, such as one in Oman, where 53.5% of university students had a positive attitude [26]. However, the percentage was higher (90.4%) among adults in Ethiopia [22], and lower (less than 50%) in a Chinese study involving children with poor vision [27]. These variations suggest that cultural perceptions and local education systems may significantly impact attitudes toward spectacle use.

Despite these generally positive attitudes, misconceptions about glasses persist. For instance, 73.7% of participants believed that glasses would make their children dependent on them, and 56.1% were concerned about bullying due to glasses. Additionally, 54.4% of participants believed glasses restrict activities, and 51.8% felt that glasses negatively impacted appearance. These findings echo studies from other regions, such as Nairobi, where 38.1% of students feared teasing [9], and Saudi Arabia, where 45.9% believed long-term use of glasses worsens vision [25]. These misconceptions should be addressed through targeted educational programs and public health campaigns to reduce stigma and promote the acceptance of spectacles.

Regarding practice, 52.6% of participants demonstrated good adherence to wearing glasses, similar to a systematic review showing 53.1% compliance [28]. However, compliance rates were lower in Ethiopia (26%) and the United States (28%) [22, 29]. These differences may be due to cultural attitudes, awareness, or disparities in access to affordable eye care services. The study also found that 74.1% of participants purchased glasses without a prescription, raising concerns about the quality and appropriateness of corrective eyewear. This highlights the need for greater emphasis on the importance of professional eye exams and obtaining glasses from certified providers.

Parental influence plays a significant role in encouraging children to wear glasses. In this study, 81.6% of parents believed that wearing glasses stabilizes vision, consistent with a study in India [24]. Furthermore, 64.0% of parents reported that their child consistently wore glasses, a higher compliance rate compared to 35.2% in Addis Ababa [30]. These findings suggest that parental involvement and education significantly impact spectacle adherence.

The role of teachers in promoting eye health should also be emphasized, as their knowledge and attitudes can significantly affect students' visual health behaviors [31]. School-based interventions, such as the "Healthy Eyes in Schools" program, have been shown to improve students' eye health [32, 33]. Teachers play a key role in shaping attitudes toward eye care, making them critical partners in increasing the acceptance and use of spectacles among students.

The positive correlation between knowledge, attitudes, and practices highlights the importance of educational interventions in improving eye health behaviors. Increasing knowledge about refractive errors and the benefits of glasses is likely to foster more favorable attitudes and improved spectacle use. However, the modest R^2 values (0.087 for attitude and 0.042 for practice) suggest that other factors, such as social and environmental influences, also play a significant role in shaping attitudes and behaviors.

This study also found that a longer duration of glasses use was associated with more positive attitudes and practices, consistent with findings from Bekele et al. [34], and Desalegn et al. [22]. However, barriers to compliance, such as bullying, broken glasses, forgetfulness, and parental disapproval, as identified in previous studies [35, 36], continue to hinder adherence. Overcoming these barriers will require multifaceted interventions, including creating supportive environments in schools, ensuring access to durable and affordable spectacles, and actively involving parents in promoting adherence.

4.1. Strength and limitation of the study

This study provides valuable insights into the knowledge, attitudes, and practices (KAP) regarding refractive errors and spectacle use within a specific population. The inclusion of diverse age of children and the examination of the duration of glasses use offer a unique perspective on factors influencing spectacle adherence. However, several limitations exist. The cross-sectional design precludes causal inferences, and self-reported data may introduce bias. Additionally, the sample was limited to

a specific demographic, which may affect the generalizability of the findings. Moreover, using convenience sampling methods might cause selection bias, affecting the generalizability of our finding. Unmeasured factors such as cultural influences, access to eye care, and psychological barriers may also have influenced the results. Further research with longitudinal designs and broader sampling is necessary to address these limitations.

5. Conclusion

This study highlights critical gaps in knowledge, attitudes, and practices regarding refractive errors and spectacle use. While most participants recognized the importance of eye check-ups and the benefits of glasses, misconceptions about refractive error inheritance and nutrition remain prevalent. Despite generally positive attitudes towards spectacles, stigma and dissatisfaction persist, and non-prescription purchases remain a concern. The duration of glasses use was positively correlated with improved attitudes and adherence, emphasizing the role of familiarity. Targeted educational interventions are essential to address misconceptions, reduce stigma, and promote better visual health, particularly among children and adolescents.

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