

3 ORIGINAL ARTICLE

4 Spectacle use, eye-care practices, and  
5 contact lens misconceptions among adults in  
6 Jazan, Saudi Arabia: a cross-sectional study

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12 ABSTRACT

13 **Background:** Uncorrected refractive error remains a leading, preventable cause of visual impairment world-  
14 wide, yet adult-level data on spectacle and contact lens perceptions in Jazan are lacking.

15 **Methodology:** A descriptive cross-sectional study surveyed adults aged 18 years and above in Jazan, Saudi  
16 Arabia, in 2026. A self-administered Arabic online questionnaire, covering sociodemographic and ocular char-  
17 acteristics, knowledge and misconceptions about spectacles and contact lenses, attitude toward spectacle  
18 use, and practices including spectacle use, eye examination, and refractive intervention, was distributed  
19 through social media platforms. Data were analyzed in SPSS using descriptive statistics, chi-square tests, and  
20 multivariable logistic regression.

21 **Results:** 513 adults completed the survey. Mean age was 25.83±9.23 years; 62.4% were female. Composite  
22 knowledge score averaged 6.42±1.67 of 10; 26.1% scored good, 47.0% moderate, and 26.9% poor. Awareness  
23 of spectacles reached 95.5% and 97.7% perceived a benefit. Current spectacle use was 43.1%, annual eye  
24 examination 36.5%, and refractive-intervention interest 29.6%. Contact lens beliefs were less accurate than  
25 matched spectacle beliefs (60.0% vs. 52.0% and 62.2% vs. 43.3% correct; McNemar  $p \leq 0.001$ ). Self-reported  
26 refractive error predicted spectacle use (AOR = 26.59), eye examination (AOR = 3.43), and intervention inter-  
27 est (AOR = 4.32), all  $p < 0.001$ . Composite knowledge showed no significant sociodemographic association (all  
28  $p > 0.05$ ).

29 **Conclusion:** High awareness of spectacles coexists with low utilization and persistent misconceptions, particu-  
30 larly around contact lenses. Targeted eye-health education is needed for Jazan's adult population.

31 **Keywords:** Contact lenses, cross-sectional studies, eyeglasses, health knowledge, attitudes, practice, refrac-  
32 tive errors; Saudi Arabia.

33 Introduction

34 Refractive error is one of the most common eye conditions  
35 in the world. It is also one of the easiest to treat. A recent  
36 meta-analysis reported that 3.7 million people were  
37 blind, and 157 million more had moderate to severe  
38 vision impairment from uncorrected refractive error in  
39 2020 alone [1]. A separate Global Burden of Disease  
40 analysis placed refraction disorders among the top causes  
41 of years lived with disability across 204 countries [2].  
42 Uncorrected refractive error also remains the single

largest cause of moderate and severe visual impairment 43  
globally, ahead of cataract [3]. Earlier estimates warned 44

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that true numbers may be even higher than commonly cited WHO figures [4].

Spectacles remain the simplest and cheapest tool to correct this problem. Yet knowledge alone does not guarantee use. In Singapore, lack of awareness was found to be a stronger driver of undercorrection than distance to a clinic [5]. In Ethiopia, a Gondar study found 90.6% of adults had adequate knowledge of spectacles, but only 24.9% actually wore them [6]. A more recent Ethiopian study in Debre Birhan reported similarly high knowledge, at 86.0%, alongside favorable attitudes [7]. Closer to our setting, a Ha'il region study found that 75.2% of Saudi respondents believed long-term spectacle wear leads to dependency [8].

Beliefs about spectacles are shaped by fear as much as fact. Nigerian spectacle wearers reported fear that spectacles would damage their eyes as a real barrier to consistent wear [9]. Omani undergraduates reported visual discomfort and moderate disadvantage scores tied to spectacle wear [10]. Contact lenses carry a separate set of myths. A Syrian university study found 64.6% of contact lens users wore lenses without a valid prescription, mostly for cosmetic reasons, and reported frequent complications [11].

Saudi Arabia carries its own share of this burden. A Riyadh-based study of healthy adults reported refractive error rates strongly linked to spectacle wear patterns [12]. In Jazan itself, refractive error among male primary-school children was already common, with hyperopia and myopic astigmatism as leading types [13]. Broader comparisons show the same pattern worldwide. A Chinese university survey found 69.9% of students had uncorrected reduced vision, yet many still avoided spectacles [14]. In South India, one in five children prescribed spectacles simply did not wear them, mainly due to lost or broken pairs [15].

Despite this global and regional evidence, adult-level data on spectacle and contact lens perceptions specific to Jazan are limited. Most Saudi work has focused on children or on other regions of the Kingdom. No study so far has measured knowledge, attitudes, and practices toward both spectacles and contact lenses together among Jazan's general adult population. This study addresses that gap.

## Subjects and Methods

This research employed a descriptive cross-sectional design to investigate the knowledge, attitudes, and utilization of spectacles, and misconceptions regarding contact lenses among adults in Jazan, Saudi Arabia. The study targeted all residents of the Jazan region aged 18 years and above, encompassing individuals with various levels of education and socioeconomic status to ensure a representative sample and yield valuable insights into spectacle use, contact lens practices, and their underlying determinants within the region. Those unable or unwilling to consent were excluded.

Based on the total population aged 18 years and above in the Jazan region, estimated to be 1.4 million according to the 2025 census, and by using Raosoft's sample size

calculator with a 95% confidence interval and 5% margin of error, the minimum required sample size was calculated to be 385 participants. Adjustments to account for a 15% non-response rate and 10% for missing data increased the target sample size to 453. Ultimately, 513 responses were collected based on the above parameters, employing a non-random convenience sampling technique.

The data collection was conducted through a self-administered questionnaire following a comprehensive literature review. It was adapted from two previously published instruments: a knowledge, attitude and practice (KAP) study of spectacle use in Gondar, Ethiopia, and a study of perceptions of spectacles and contact lenses in the Ha'il region, Saudi Arabia [6,8]. The questionnaire was divided into four sections.

The first section collected sociodemographic and ocular characteristics, including age, sex, nationality, marital status, educational level, occupation, monthly household income, self-reported refractive error (myopia, hyperopia, astigmatism, or none), and systemic comorbidity.

The second section assessed knowledge and misconceptions using ten items (four on a three-point agreement scale and six dichotomous) covering beliefs about spectacles (that they worsen vision, improve vision, or cause dependency; that they can be worn at any age and by both sexes; that non-prescribed spectacles cause ocular problems) and matched items on contact lenses (worsening vision, improving vision, dependency, and complications from poor lens care). Each correct answer scored 1 and each incorrect or "don't know" answer scored 0, giving a total of 0–10. Using Bloom's cutoffs, scores were classified as good ( $\geq 80\%$ ), moderate (60%–79%), or poor ( $< 60\%$ ). Internal consistency was low ( $KR-20 = 0.42$ ), consistent with a formative rather than unidimensional scale. Awareness of spectacles, perceived benefit, and primary source of information (healthcare provider or other) were recorded separately.

The third section evaluated the participants' attitude and willingness to wear spectacles if medically prescribed.

The final section identified participants' practices toward current spectacle use, main reason for use (among wearers) or non-use (among non-wearers), source of spectacles, annual eye examination, school-entry vision screening, and refractive intervention with its reasons.

Data collection occurred between April 2026 and September 2026 using a self-administered online questionnaire. The questionnaire was piloted with 20 participants to assess its clarity before it was finalized. The questionnaire link was distributed through various social media platforms such as WhatsApp, Telegram, X (Twitter), and Snapchat. An explanatory page detailed the study objectives, confidentiality protections, and participants' rights. Responses were monitored regularly for completeness, and incomplete or incoherent entries were excluded from the final dataset.

Data were analyzed using IBM Statistical Package for Social Sciences software version 29. Descriptive statistics, including frequencies, percentages, means, and SD, were used to summarize participant characteristics

**Table 1.** Sociodemographic, systemic and ocular characteristics of the study participants (N = 513).

| Characteristic                     | n                 | %    |
|------------------------------------|-------------------|------|
| Age (years)                        |                   |      |
| Mean ± SD                          | 25.83 ± 9.23      |      |
| Median (IQR); range                | 22 (20–27); 18–60 |      |
| 18–24                              | 363               | 70.8 |
| 25–34                              | 64                | 12.5 |
| 35–44                              | 43                | 8.4  |
| ≥45                                | 43                | 8.4  |
| Gender                             |                   |      |
| Female                             | 320               | 62.4 |
| Male                               | 193               | 37.6 |
| Nationality                        |                   |      |
| Saudi                              | 500               | 97.5 |
| Non-Saudi                          | 13                | 2.5  |
| Marital status                     |                   |      |
| Single                             | 379               | 73.9 |
| Married                            | 124               | 24.2 |
| Divorced/Widowed                   | 10                | 1.9  |
| Has children                       |                   |      |
| Yes                                | 106               | 20.7 |
| No                                 | 92                | 17.9 |
| Selected “not married”             | 315               | 61.4 |
| Educational level                  |                   |      |
| Secondary or below                 | 140               | 27.3 |
| University                         | 363               | 70.8 |
| Postgraduate                       | 10                | 1.9  |
| Monthly household income (SAR)     |                   |      |
| < 5 000                            | 129               | 25.1 |
| 5 000–9 999                        | 97                | 18.9 |
| 10 000–14 999                      | 119               | 23.2 |
| ≥15 000                            | 168               | 32.7 |
| Occupational sector                |                   |      |
| Student                            | 324               | 63.2 |
| Education                          | 67                | 13.1 |
| Not employed                       | 64                | 12.5 |
| Health                             | 23                | 4.5  |
| Military                           | 19                | 3.7  |
| Administrative                     | 10                | 1.9  |
| Manual/self-employed               | 4                 | 0.8  |
| Industrial                         | 2                 | 0.4  |
| Self-reported ocular diagnosis     |                   |      |
| Myopia                             | 158               | 30.8 |
| Astigmatism                        | 120               | 23.4 |
| Hyperopia                          | 43                | 8.4  |
| Strabismus                         | 14                | 2.7  |
| Any refractive error               | 224               | 43.7 |
| Self-reported systemic comorbidity |                   |      |
| Dyslipidemia                       | 33                | 6.4  |
| Diabetes mellitus                  | 25                | 4.9  |
| Hypertension                       | 24                | 4.7  |
| Sickle cell disease                | 7                 | 1.4  |
| Thalassaemia                       | 5                 | 1.0  |
| Any systemic comorbidity           | 68                | 13.3 |

Note. Values are n (%) unless otherwise indicated. SAR = Saudi Riyal; SD = standard deviation; IQR = interquartile range. Self-reported ocular diagnoses and systemic comorbidities are non-exclusive categories; participants could report more than one condition, and these blocks therefore do not sum to 100%. “Any refractive error” denotes a self-reported diagnosis of myopia, hyperopia and/or astigmatism. The parity item was displayed to every participant irrespective of marital status; that row therefore reports the response given, not derived marital status.

**Table 2.** Response distribution and psychometric performance of the ten knowledge and belief items and the resulting composite knowledge score (N = 513).

| Item                                                                                         | Agree / Yes n (%) | Neutral n (%) | Disagree / No n (%) | Scientifically correct response | Corrected item-total r |
|----------------------------------------------------------------------------------------------|-------------------|---------------|---------------------|---------------------------------|------------------------|
| <b>Panel A. Knowledge statements (three-point agreement scale)</b>                           |                   |               |                     |                                 |                        |
| Spectacles can be worn at any age                                                            | 447 (87.1)        | 49 (9.6)      | 17 (3.3)            | Agree                           | 0.24                   |
| Both sexes can wear spectacles                                                               | 490 (95.5)        | 19 (3.7)      | 4 (0.8)             | Agree                           | 0.29                   |
| Medically prescribed spectacles weaken the eye                                               | 59 (11.5)         | 109 (21.2)    | 345 (67.3)          | Disagree                        | 0.29                   |
| Wearing non-prescribed spectacles causes ocular problems                                     | 360 (70.2)        | 108 (21.1)    | 45 (8.8)            | Agree                           | 0.05                   |
| <b>Panel B. Beliefs about long-term spectacle and contact lens use (dichotomous)</b>         |                   |               |                     |                                 |                        |
| With long-term use, wearing spectacles worsens vision                                        | 205 (40.0)        | —             | 308 (60.0)          | No                              | 0.23                   |
| With long-term use, wearing spectacles improves vision                                       | 319 (62.2)        | —             | 194 (37.8)          | Yes                             | 0.28                   |
| Long-term spectacle use creates dependency on spectacles                                     | 450 (87.7)        | —             | 63 (12.3)           | No                              | 0.02                   |
| With long-term use, wearing contact lenses worsens vision                                    | 246 (48.0)        | —             | 267 (52.0)          | No                              | 0.17                   |
| With long-term use, prescription contact lenses improve vision                               | 222 (43.3)        | —             | 291 (56.7)          | Yes                             | 0.10                   |
| Wearing contact lenses without proper care causes ocular infection and further complications | 470 (91.6)        | —             | 43 (8.4)            | Yes                             | 0.03                   |
| <b>Composite knowledge score (0–10)</b>                                                      |                   |               |                     |                                 |                        |
| Poor (<60%)                                                                                  | 138 (26.9)        |               |                     | 95% CI 23.2–30.9                |                        |
| Moderate (60%–79%)                                                                           | 241 (47.0)        |               |                     | 95% CI 42.7–51.3                |                        |
| Good (≥80%)                                                                                  | 134 (26.1)        |               |                     | 95% CI 22.5–30.1                |                        |

Note. Values are n (%) of participants selecting each response option. Panel B items were dichotomous, and the “Neutral” column is therefore not applicable (—). Each item was scored 1 for the scientifically correct response shown and 0 otherwise; neutral responses were scored as incorrect. The composite knowledge score is the unweighted sum of the ten items (range 0–10) and was classified using Bloom’s cutoff points: Good ≥ 80% (8–10), Moderate 60%–79% (6–7), Poor < 60% (0–5). Shapiro–Wilk W = 0.953,  $p < 0.001$ . Corrected item-total r is the Pearson correlation between each item and the sum of the remaining nine items. CI = confidence interval (Wilson score method).

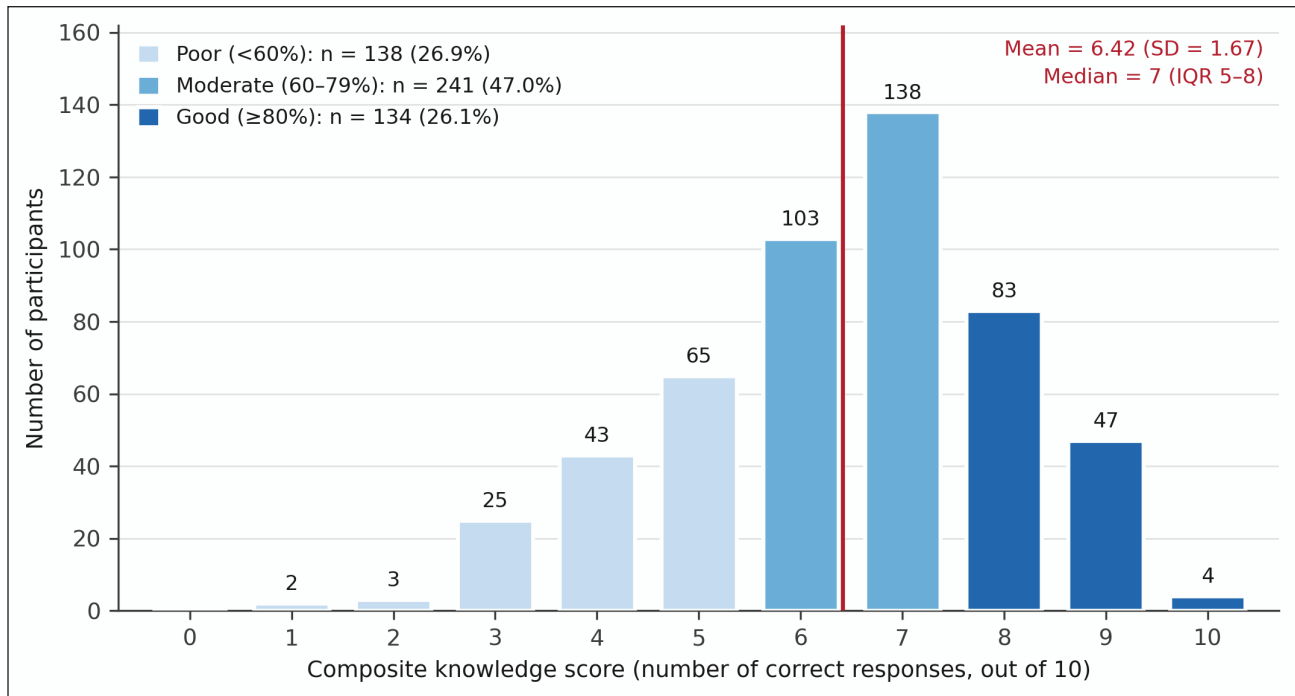


**Figure 1.** Distribution of the composite knowledge score and its classification by Bloom's cutoff points (N = 513).

Note. Bars show the number of participants attaining each composite score. Bars are shaded by Bloom's knowledge category. The vertical line marks the sample mean.

and responses. Continuous variables were assessed for normality using the Shapiro–Wilk test and visual inspection of histograms. Mann–Whitney U and Kruskal–Wallis tests were performed to assess associations between sociodemographic variables and knowledge scores. Chi-square tests and Fisher's exact tests were performed to assess and analyze categorical relationships. Binary logistic regression analysis was conducted to identify predictors of good knowledge and practice regarding eye spectacles and contact lenses. A *P*-value of less than 0.05 was considered statistically significant for all tests performed in the analysis. The study adhered to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

Ethical review and approval were granted by the Standing Committee for Scientific Research at Jazan University. Participation was voluntary and preceded by electronic informed consent (Reference No. REC-47/10/1840, dated April 6, 2026). All study procedures followed institutional and national ethical standards and the principles of the Declaration of Helsinki to ensure transparency and completeness. Prior to participation, individuals were informed about the study objectives, confidentiality measures, and voluntary nature of participation, and electronic informed consent was obtained.

## Results

A total of 513 adults completed the survey, exceeding the minimum required sample of 385. Mean age was 25.83 ± 9.23 years (median 22, IQR 20–27; range 18–60), and 70.8% were aged 18–24 years. Females made up 62.4%

of the sample, and 97.5% were Saudi nationals. Most participants were single (73.9%) and held a university degree (70.8%). Any self-reported refractive error was present in 43.7%, with myopia the most common type at 30.8%. Any systemic comorbidity was reported by 13.3% (Table 1).

The ten-item composite knowledge score averaged 6.42 ± 1.67 out of 10 (median 7, IQR 5–8). Classification by Bloom's cut-offs placed 26.1% in the good category, 47.0% moderate, and 26.9% poor (Table 2, Figure 1). Internal consistency was low (KR-20 = 0.42), consistent with a formative rather than unidimensional scale. Item-level accuracy ranged from 12.3% for the belief that long-term spectacle wear causes dependency to 95.5% for the statement that both sexes can wear spectacles (Table 2, Figure 2). Paired comparisons showed the scientifically correct response was less common for contact lens items than for matched spectacle items: 60.0% versus 52.0% for the worsening-vision belief (McNemar  $\chi^2(1) = 10.74$ ,  $p = 0.001$ ) and 62.2% versus 43.3% for the improving-vision belief ( $\chi^2(1) = 62.69$ ,  $p < 0.001$ ) (Figure 2).

Awareness of spectacles was high at 95.5%, and 97.7% believed spectacles offer a benefit. Willingness to wear spectacles if medically prescribed reached 95.1%. Current spectacle use stood at 43.1% (95% CI 38.9–47.4). Among wearers, 64.3% cited distance vision as their main reason for wearing spectacles; among non-wearers, 79.5% cited no perceived need. Government service centers supplied spectacles to 42.7% of all participants. Annual eye examination was reported by 36.5% (95% CI 32.4–40.7), and 65.1% had received a school-entry vision screening at some point. Refractive

**Table 3.** Attitudes toward spectacles, spectacle utilization, eye-care practices, and refractive-intervention profile of the study participants (N = 513).

| Variable                                                                                                                                      | n   | %    | 95% CI (%) |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----|------|------------|
| Awareness and attitude                                                                                                                        |     |      |            |
| Has heard of / knows about spectacles                                                                                                         | 490 | 95.5 | 93.4–97.0  |
| Believes there is a benefit to wearing spectacles                                                                                             | 501 | 97.7 | 96.0–98.7  |
| Would wear spectacles if medically prescribed                                                                                                 | 488 | 95.1 | 92.9–96.7  |
| <i>Perceived reason spectacles are useful</i>                                                                                                 |     |      |            |
| Protection                                                                                                                                    | 211 | 41.1 | —          |
| Distance vision only                                                                                                                          | 173 | 33.7 | —          |
| Near vision only                                                                                                                              | 86  | 16.8 | —          |
| Do not know                                                                                                                                   | 39  | 7.6  | —          |
| Fashion                                                                                                                                       | 4   | 0.8  | —          |
| <i>Stated barrier among those unwilling to wear if prescribed (n = 25; multiple responses permitted)</i>                                      |     |      |            |
| Not useful / dislikes them                                                                                                                    | 11  | 44.0 | —          |
| Believes spectacles worsen the problem                                                                                                        | 8   | 32.0 | —          |
| Socially unacceptable                                                                                                                         | 4   | 16.0 | —          |
| Makes the eyes look larger                                                                                                                    | 3   | 12.0 | —          |
| Because of my age                                                                                                                             | 3   | 12.0 | —          |
| Cannot afford the cost                                                                                                                        | 2   | 8.0  | —          |
| Makes the eyes look smaller                                                                                                                   | 1   | 4.0  | —          |
| Because of my sex                                                                                                                             | 0   | 0.0  | —          |
| My religion does not permit it                                                                                                                | 0   | 0.0  | —          |
| Internally inconsistent response ("I would use them")                                                                                         | 5   | 20.0 | —          |
| Spectacle utilization                                                                                                                         |     |      |            |
| Currently wearing spectacles                                                                                                                  | 221 | 43.1 | 38.9–47.4  |
| <i>Main reason for wearing spectacles (among current wearers, n = 221)</i>                                                                    |     |      |            |
| Distance vision                                                                                                                               | 142 | 64.3 | —          |
| Near vision                                                                                                                                   | 34  | 15.4 | —          |
| Protection                                                                                                                                    | 25  | 11.3 | —          |
| Fashion                                                                                                                                       | 2   | 0.9  | —          |
| Other                                                                                                                                         | 12  | 5.4  | —          |
| Internally inconsistent response ("I do not use them")                                                                                        | 6   | 2.7  | —          |
| <i>Main reason for not wearing spectacles (among current non-wearers, n = 292)</i>                                                            |     |      |            |
| Does not need them                                                                                                                            | 232 | 79.5 | —          |
| Intolerance                                                                                                                                   | 13  | 4.5  | —          |
| Lost                                                                                                                                          | 4   | 1.4  | —          |
| Broken                                                                                                                                        | 2   | 0.7  | —          |
| Socially unacceptable                                                                                                                         | 1   | 0.3  | —          |
| Lack of awareness                                                                                                                             | 4   | 1.4  | —          |
| Other                                                                                                                                         | 24  | 8.2  | —          |
| Internally inconsistent response ("I do use them")                                                                                            | 12  | 4.1  | —          |
| <i>Reported source of spectacles (item offered no not-applicable option; answered by all 513 participants, including current non-wearers)</i> |     |      |            |
| Government service center                                                                                                                     | 219 | 42.7 | —          |
| Private sector                                                                                                                                | 114 | 22.2 | —          |
| Retail stores                                                                                                                                 | 97  | 18.9 | —          |
| Medical convoys                                                                                                                               | 50  | 9.7  | —          |
| Street vendor                                                                                                                                 | 3   | 0.6  | —          |
| Other                                                                                                                                         | 30  | 5.8  | —          |
| Eye-care practice                                                                                                                             |     |      |            |
| Undergoes an annual eye examination                                                                                                           | 187 | 36.5 | 32.4–40.7  |
| Ever received a school-entry vision screening                                                                                                 | 334 | 65.1 | 60.9–69.1  |
| <i>Timing of school-entry vision screening</i>                                                                                                |     |      |            |
| Before primary school                                                                                                                         | 113 | 22.0 | —          |
| Between primary and middle school                                                                                                             | 57  | 11.1 | —          |

(Continued)

| Variable                                                                           | <i>n</i> | %    | 95% CI (%) |
|------------------------------------------------------------------------------------|----------|------|------------|
| Between middle and high school                                                     | 68       | 13.3 | —          |
| Before university                                                                  | 96       | 18.7 | —          |
| Never examined                                                                     | 179      | 34.9 | —          |
| Refractive intervention                                                            |          |      |            |
| Has undergone or plans a refractive intervention                                   | 152      | 29.6 | 25.8–33.7  |
| <i>Reason for considering intervention (n = 152; multiple responses permitted)</i> |          |      |            |
| Dislikes dependence on spectacles and/or lenses                                    | 89       | 58.6 | —          |
| Occupational requirements                                                          | 40       | 26.3 | —          |
| Dislikes own appearance with spectacles                                            | 37       | 24.3 | —          |
| Face-mask wear with spectacles is bothersome                                       | 30       | 19.7 | —          |
| Other                                                                              | 12       | 7.9  | —          |
| Internally inconsistent response (“I am not considering any procedure”)            | 36       | 23.7 | —          |
| Primary source of eye-health information                                           |          |      |            |
| Internet                                                                           | 195      | 38.0 | —          |
| Healthcare provider                                                                | 134      | 26.1 | —          |
| School/University                                                                  | 60       | 11.7 | —          |
| Friend/family member                                                               | 36       | 7.0  | —          |
| Television                                                                         | 10       | 1.9  | —          |
| Other                                                                              | 78       | 15.2 | —          |

*Note.* Denominators are *N* = 513 unless a subgroup is stated in the sub-heading. Blocks marked “multiple responses permitted” are non-exclusive and do not sum to 100%. The online instrument did not enforce conditional branching, so the follow-up items were displayed to all participants irrespective of their answer to the corresponding gate question; each follow-up item is therefore reported within the subgroup defined by the gate item, and logically inconsistent selections are reported explicitly rather than excluded. Of the 23 participants who reported not knowing about spectacles, 18 nevertheless reported a benefit to wearing them and 21 stated they would wear them if prescribed. This is why more participants report a perceived benefit (501) than report knowing about spectacles (490). The item on the source of spectacles offered no not-applicable option and was answered by all participants, including those who do not currently wear spectacles.

intervention, either completed or planned, was reported by 29.6% (95% CI 25.8–33.7); the leading reason was dislike of dependence on spectacles or lenses (58.6%), followed by occupational need (26.3%) and discomfort from face-mask wear (19.7%) (Table 3).

Composite knowledge score showed no significant association with gender, age group, education, income, occupation, marital status, refractive error, comorbidity, or information source (all  $p > 0.05$ ). However, three individual knowledge items did differ significantly by age group, including the item on non-prescribed spectacles causing ocular problems ( $\chi^2(3) = 12.13, p = 0.007$ ) (Table 4). For practice outcomes, age group was associated with spectacle use ( $\chi^2(3) = 14.57, p = 0.002$ ), and self-reported refractive error was strongly associated with all three practice outcomes: spectacle use ( $\chi^2(1) = 230.76, p < 0.001$ ), annual eye examination ( $\chi^2(1) = 38.04, p < 0.001$ ), and refractive intervention ( $\chi^2(1) = 42.98, p < 0.001$ ). Naming a healthcare provider as the primary information source was linked to higher spectacle use ( $\chi^2(1) = 8.39, p = 0.004$ ) and higher annual eye examination ( $\chi^2(1) = 6.44, p = 0.011$ ) (Table 5).

In multivariable regression, the model predicting good knowledge was not significant overall (omnibus  $\chi^2(10) = 5.98, p = 0.817$ ; Nagelkerke  $R^2 = 0.017$ ), and no predictor reached significance. Self-reported refractive error was the dominant predictor across the three practice models: spectacle use (AOR = 26.59, 95% CI 16.25–43.51,  $p < 0.001$ ), annual eye examination (AOR = 3.43, 95% CI 2.31–5.10,  $p < 0.001$ ), and refractive intervention (AOR

= 4.32, 95% CI 2.81–6.65,  $p < 0.001$ ). Household income of 5,000–9,999 SAR and 15,000 SAR or more were both associated with lower odds of annual eye examination compared to income under 5,000 SAR (AOR = 0.53,  $p = 0.037$ ; AOR = 0.48,  $p = 0.005$ , respectively). The spectacle-use model showed the best discrimination, correctly classifying 83.8% of cases (Nagelkerke  $R^2 = 0.533$ ) (Table 6).

## Discussion

This study measured knowledge, attitudes, and practices toward spectacles, along with beliefs about contact lenses, among 513 adults in Jazan. The main finding was a clear gap between awareness and action. Almost every participant knew about spectacles and saw their benefit, yet fewer than half actually wore them, and only about a third attended annual eye examinations.

This awareness-practice gap mirrors findings from other Arab and African settings. In Oman, students at the University of Buraimi reported high perceived usefulness of spectacles but poor uptake, driven by fears about appearance and comfort [16]. Nigerian undergraduates showed a similar pattern, holding generally accurate beliefs but still avoiding spectacles due to cosmetic concerns [17]. Population coverage data from India tell the same story from a service angle: even where spectacles are available, effective coverage for distance vision often remains low [18]. Our finding that “no perceived need” was the leading reason for non-wear, cited by 79.5% of

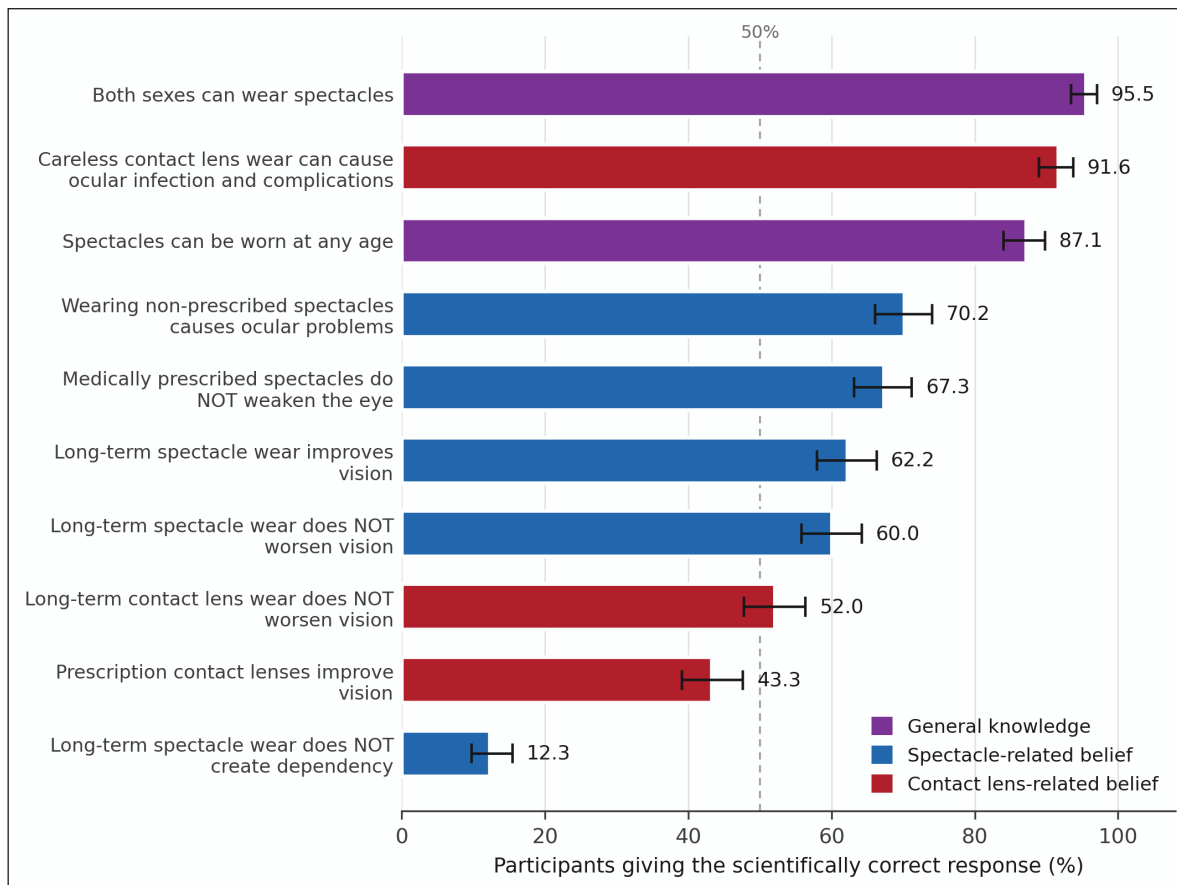


**Figure 2.** Proportion of participants giving the scientifically correct response to each of the ten knowledge and belief items, with 95% confidence intervals ( $N = 513$ ).

Note. Bars show the percentage of participants answering each item correctly according to the scoring key in Table 2; horizontal whiskers are Wilson score 95% confidence intervals. Paired within-participant comparisons of the corresponding spectacle and contact lens beliefs (McNemar test with continuity correction) showed that the scientifically correct response was significantly less common for the contact lens item than for the corresponding spectacle item: for the belief that long-term wear worsens vision,  $\chi^2(1) = 10.74, p = 0.001$  (60.0% vs. 52.0% correct); and for the belief that long-term wear improves vision,  $\chi^2(1) = 62.69, p < 0.001$  (62.2% vs. 43.3% correct).

non-wearers, suggests the barrier in Jazan is less about cost or access and more about self-assessment of need.

The belief that long-term spectacle wear causes dependency, held by 87.7% of our sample, deserves particular attention. This mirrors a pattern reported among primary school children in Qassim, where non-compliance was tied to parental disapproval and similar fears [19]. Clinically, this fear runs opposite to the evidence. A controlled trial found that undercorrecting myopia, rather than protecting the eye, actually speeds up myopia progression [20]. Avoiding spectacles to prevent dependency may therefore worsen the very outcome people fear.

Contact lens beliefs were consistently less accurate than matched spectacle beliefs in our data. This asymmetry likely reflects lower real-world exposure to contact lenses in this population, since most participants had never worn them. Comparable knowledge gaps have been documented among contact lens users themselves. University students in Thailand showed low compliance with lens care despite reporting adequate general knowledge, showing that knowledge and safe practice do not always align [21]. A Spanish university study found

64.9% of lens wearers had never been informed of the risks of contact lens wear at all [22]. If even lens wearers hold incomplete knowledge, it is unsurprising that our non-wearing general population scored lower still on contact lens items.

Our regression results point to lived experience, not demographics, as the real driver of eye-care behavior. Self-reported refractive error predicted every practice outcome we measured, while age, gender, education, and occupation did not. This lived-experience effect appears elsewhere too. In Malaysia, referral for diabetic retinopathy, not education or income alone, was the strongest predictor of annual eye examination among diabetics [23]. In Ethiopia, having a personal history of eye disease was similarly the strongest correlate of eye-care service use [24]. Interestingly, our income finding ran counter to typical assumptions: higher-income participants had lower odds of annual eye examination than lower-income participants. A large United States study similarly found income effects on eye-care use varied by state, sometimes reversing direction entirely [25], so this reversal is not without precedent.

**Table 4.** Composite knowledge score by sociodemographic and clinical characteristics (N = 513).

| Characteristic                 | n   | Mean (SD)   | Median (IQR) | Test statistic          | p    | Effect size          |
|--------------------------------|-----|-------------|--------------|-------------------------|------|----------------------|
| Gender                         |     |             |              | U = 31681.00, z = 0.50  | .616 | r = 0.02             |
| Male                           | 193 | 6.44 (1.64) | 7 (6–8)      |                         |      |                      |
| Female                         | 320 | 6.40 (1.69) | 7 (5–8)      |                         |      |                      |
| Age group (years)              |     |             |              | H(3) = 3.52             | .319 | $\epsilon^2 = 0.007$ |
| 18–24                          | 363 | 6.40 (1.69) | 7 (5–8)      |                         |      |                      |
| 25–34                          | 64  | 6.11 (1.70) | 7 (5–7)      |                         |      |                      |
| 35–44                          | 43  | 6.65 (1.54) | 7 (6–8)      |                         |      |                      |
| ≥ 45                           | 43  | 6.74 (1.51) | 7 (6–8)      |                         |      |                      |
| Educational level              |     |             |              | H(2) = 2.71             | .258 | $\epsilon^2 = 0.005$ |
| Secondary or below             | 140 | 6.49 (1.62) | 7 (6–8)      |                         |      |                      |
| University                     | 363 | 6.37 (1.70) | 7 (5–7)      |                         |      |                      |
| Postgraduate                   | 10  | 7.10 (1.29) | 7 (7–8)      |                         |      |                      |
| Monthly household income (SAR) |     |             |              | H(3) = 1.86             | .601 | $\epsilon^2 = 0.004$ |
| < 5 000                        | 129 | 6.44 (1.73) | 7 (6–8)      |                         |      |                      |
| 5 000–9 999                    | 97  | 6.22 (1.68) | 6 (5–7)      |                         |      |                      |
| 10 000–14 999                  | 119 | 6.47 (1.65) | 7 (5–8)      |                         |      |                      |
| ≥ 15 000                       | 168 | 6.47 (1.64) | 7 (5–8)      |                         |      |                      |
| Occupational status            |     |             |              | H(2) = 0.07             | .964 | $\epsilon^2 = 0.000$ |
| Student                        | 324 | 6.41 (1.70) | 7 (5–8)      |                         |      |                      |
| Employed                       | 125 | 6.40 (1.58) | 7 (5–7)      |                         |      |                      |
| Not employed                   | 64  | 6.47 (1.70) | 7 (5–8)      |                         |      |                      |
| Marital status                 |     |             |              | U = 24389.50, z = -0.69 | .489 | r = 0.03             |
| Single                         | 379 | 6.37 (1.72) | 7 (5–8)      |                         |      |                      |
| Ever married                   | 134 | 6.54 (1.53) | 7 (5–8)      |                         |      |                      |
| Self-reported refractive error |     |             |              | U = 33383.00, z = 0.62  | .535 | r = 0.03             |
| No                             | 289 | 6.43 (1.68) | 7 (5–8)      |                         |      |                      |
| Yes                            | 224 | 6.39 (1.67) | 7 (5–8)      |                         |      |                      |
| Systemic comorbidity           |     |             |              | U = 15103.00, z = -0.02 | .981 | r = 0.00             |
| No                             | 445 | 6.41 (1.70) | 7 (5–8)      |                         |      |                      |
| Yes                            | 68  | 6.44 (1.51) | 7 (6–7)      |                         |      |                      |
| Primary information source     |     |             |              | U = 24619.50, z = -0.53 | .594 | r = 0.02             |
| Other source                   | 379 | 6.40 (1.64) | 7 (5–8)      |                         |      |                      |
| Healthcare provider            | 134 | 6.47 (1.77) | 7 (5–8)      |                         |      |                      |

Note. Distribution-free tests were used throughout: the Mann–Whitney *U* test for two-group comparisons (effect size  $r = |z|/\sqrt{N}$ ) and the Kruskal–Wallis *H* test for comparisons of three or more groups (effect size  $\epsilon^2$ ). Three individual items differed significantly by age group: “Wearing non-prescribed spectacles causes ocular problems” ( $\chi^2(3) = 12.13, p = 0.007$ , Cramér’s  $V = 0.154$ ; 66.1% vs. 73.4% vs. 83.7% vs. 86.0% correct across the 18–24, 25–34, 35–44, and ≥ 45-year groups, respectively); “With long-term use, wearing spectacles worsens vision” ( $\chi^2(3) = 9.99, p = 0.019$ , Cramér’s  $V = 0.140$ ; 62.8% vs. 43.8% vs. 53.5% vs. 67.4% correct across the 18–24, 25–34, 35–44 and ≥ 45-year groups respectively); “With long-term use, wearing spectacles improves vision” ( $\chi^2(3) = 11.37, p = 0.010$ , Cramér’s  $V = 0.149$ ; 57.9% vs. 78.1% vs. 67.4% vs. 69.8% correct across the 18–24, 25–34, 35–44 and ≥ 45-year groups, respectively); these item-level differences are exploratory and were not corrected for multiple comparisons.

Interest in refractive surgery, reported by 29.6% of our sample, was driven mainly by a wish to escape dependency on spectacles or lenses. Regional studies show growing acceptance of such procedures. A UAE study found 80% awareness of refractive surgery among adults, though actual uptake remained under 30% [26]. A Saudi study similarly found fear of complications, not cost, as the main obstacle to considering surgery [27]. Our secondary finding, that face-mask discomfort motivated 19.7% of intervention-seekers, echoes global reports of rising refractive surgery interest tied to mask-related spectacle fogging during the pandemic era [28]. Undercorrected refractive error and awareness gaps have also been shown, in Singapore, to sustain each

other in a cycle [29], a cycle our Jazan data appear to reproduce.

## Strengths and Limitations

This study reached 513 adults, exceeding its planned sample, and applied a structured, previously piloted instrument. It also reported transparently on internal response inconsistencies rather than excluding them. However, the convenience online sampling method may underrepresent adults without internet access or lower digital literacy. Self-reported diagnoses were not clinically verified, and no visual acuity testing was performed. The ten items evaluate separate beliefs instead of a singular characteristic, so the anticipated low

**Table 5. Bivariate associations between participant characteristics and the three eye-care practice outcomes (N = 513).**

| Characteristic                 | n   | Current spectacle use n (%)                | Annual eye examination n (%)              | Refractive intervention n (%)             |
|--------------------------------|-----|--------------------------------------------|-------------------------------------------|-------------------------------------------|
| All participants               | 513 | 221 (43.1)                                 | 187 (36.5)                                | 152 (29.6)                                |
| Gender                         |     |                                            |                                           |                                           |
| Male                           | 193 | $\chi^2(1) = 1.16, p = 0.281, V = 0.048$   | $\chi^2(1) = 2.50, p = 0.114, V = 0.070$  | $\chi^2(1) = 0.40, p = 0.525, V = 0.028$  |
| Female                         | 320 | 89 (46.1)                                  | 62 (32.1)                                 | 54 (28.0)                                 |
| Age group (years)              |     |                                            |                                           |                                           |
| 18–24                          | 363 | 132 (41.3)                                 | 125 (39.1)                                | 98 (30.6)                                 |
| 25–34                          | 64  | $\chi^2(3) = 14.57, p = 0.002, V = 0.169$  | $\chi^2(3) = 1.47, p = 0.689, V = 0.054$  | $\chi^2(3) = 2.02, p = 0.569, V = 0.063$  |
| 35–44                          | 43  | 163 (44.9)                                 | 131 (36.1)                                | 101 (27.8)                                |
| ≥45                            | 43  | 15 (23.4)                                  | 25 (39.1)                                 | 21 (32.8)                                 |
| Educational level              |     |                                            |                                           |                                           |
| Secondary or below             | 140 | 18 (41.9)                                  | 13 (30.2)                                 | 15 (34.9)                                 |
| University                     | 363 | 25 (58.1)                                  | 18 (41.9)                                 | 15 (34.9)                                 |
| Postgraduate                   | 10  | $\chi^2(2) = 1.59, p = 0.451, V = 0.056$   | $\chi^2(2) = 1.11, p = 0.574, V = 0.047$  | $\chi^2(2) = 1.62, p = 0.444, V = 0.056$  |
| Monthly household income (SAR) |     |                                            |                                           |                                           |
| <5 000                         | 129 | 56 (40.0)                                  | 48 (34.3)                                 | 46 (32.9)                                 |
| 5 000–9 999                    | 97  | 162 (44.6)                                 | 134 (36.9)                                | 102 (28.1)                                |
| 10 000–14 999                  | 119 | 3 (30.0)                                   | 5 (50.0)                                  | 4 (40.0)                                  |
| ≥15 000                        | 168 | $\chi^2(3) = 3.66, p = 0.300, V = 0.084$   | $\chi^2(3) = 5.62, p = 0.132, V = 0.105$  | $\chi^2(3) = 2.43, p = 0.487, V = 0.069$  |
| Occupational status            |     |                                            |                                           |                                           |
| Student                        | 324 | 53 (41.1)                                  | 57 (44.2)                                 | 42 (32.6)                                 |
| Employed                       | 125 | 35 (36.1)                                  | 31 (32.0)                                 | 28 (28.9)                                 |
| Not employed                   | 64  | 53 (44.5)                                  | 45 (37.8)                                 | 39 (32.8)                                 |
| Marital status                 |     |                                            |                                           |                                           |
| Single                         | 379 | 80 (47.6)                                  | 54 (32.1)                                 | 43 (25.6)                                 |
| Ever married                   | 134 | $\chi^2(2) = 5.78, p = 0.056, V = 0.106$   | $\chi^2(2) = 0.78, p = 0.678, V = 0.039$  | $\chi^2(2) = 1.37, p = 0.505, V = 0.052$  |
| Self-reported refractive error |     |                                            |                                           |                                           |
| No                             | 289 | 151 (46.6)                                 | 114 (35.2)                                | 93 (28.7)                                 |
| Yes                            | 224 | 50 (40.0)                                  | 47 (37.6)                                 | 42 (33.6)                                 |
| Systemic comorbidity           |     |                                            |                                           |                                           |
| No                             | 445 | 20 (31.3)                                  | 26 (40.6)                                 | 17 (26.6)                                 |
| Yes                            | 68  | $\chi^2(1) = 1.35, p = 0.245, V = 0.051$   | $\chi^2(1) = 0.00, p = 0.974, V = 0.001$  | $\chi^2(1) = 0.08, p = 0.775, V = 0.013$  |
| Primary information source     |     |                                            |                                           |                                           |
| Other source                   | 379 | 169 (44.6)                                 | 138 (36.4)                                | 111 (29.3)                                |
| Healthcare provider            | 134 | 52 (38.8)                                  | 49 (36.6)                                 | 41 (30.6)                                 |
| Knowledge level                |     |                                            |                                           |                                           |
| Poor (<60%)                    | 289 | $\chi^2(1) = 230.76, p < 0.001, V = 0.671$ | $\chi^2(1) = 38.04, p < 0.001, V = 0.272$ | $\chi^2(1) = 42.98, p < 0.001, V = 0.289$ |
| Moderate (60%–79%)             | 241 | 40 (13.8)                                  | 72 (24.9)                                 | 52 (18.0)                                 |
| Good (≥80%)                    | 134 | 181 (80.8)                                 | 115 (51.3)                                | 100 (44.6)                                |
| Primary information source     |     |                                            |                                           |                                           |
| Other source                   | 379 | $\chi^2(1) = 0.01, p = 0.938, V = 0.003$   | $\chi^2(1) = 0.36, p = 0.549, V = 0.026$  | $\chi^2(1) = 6.37, p = 0.012, V = 0.111$  |
| Healthcare provider            | 134 | 192 (43.1)                                 | 160 (36.0)                                | 123 (27.6)                                |
| Knowledge level                |     |                                            |                                           |                                           |
| Poor (<60%)                    | 241 | 29 (42.6)                                  | 27 (39.7)                                 | 29 (42.6)                                 |
| Moderate (60%–79%)             | 241 | $\chi^2(1) = 8.39, p = 0.004, V = 0.128$   | $\chi^2(1) = 6.44, p = 0.011, V = 0.112$  | $\chi^2(1) = 0.14, p = 0.708, V = 0.017$  |
| Good (≥80%)                    | 134 | 149 (39.3)                                 | 126 (33.2)                                | 114 (30.1)                                |
| Healthcare provider            | 134 | 72 (53.7)                                  | 61 (45.5)                                 | 38 (28.4)                                 |
| Knowledge level                |     |                                            |                                           |                                           |
| Poor (<60%)                    | 138 | $\chi^2(2) = 0.13, p = 0.937, V = 0.016$   | $\chi^2(2) = 1.76, p = 0.415, V = 0.059$  | $\chi^2(2) = 2.47, p = 0.291, V = 0.069$  |
| Moderate (60%–79%)             | 241 | 61 (44.2)                                  | 44 (31.9)                                 | 47 (34.1)                                 |
| Good (≥80%)                    | 134 | 102 (42.3)                                 | 93 (38.6)                                 | 71 (29.5)                                 |
| Primary information source     |     |                                            |                                           |                                           |
| Other source                   | 134 | 58 (43.3)                                  | 50 (37.3)                                 | 34 (25.4)                                 |

Note. Values are n (%) of participants within each row category who reported the outcome; percentages are row percentages within the characteristic category. Test statistics beside each characteristic are Pearson chi-square tests of independence with Cramér's V as the effect size. **Bold** denotes statistical significance at  $p < 0.05$  (two-tailed). "Refractive intervention" denotes having undergone or planning to undergo a refractive procedure. "Primary information source" contrasts participants naming a healthcare provider as their main source of eye-health information against all other sources.

**Table 6.** Multivariable binary logistic regression models for knowledge and the three eye-care practice outcomes (N = 513).

| Predictor                                              | Model 1<br>Good knowledge<br>AOR (95% CI)<br>p | Model 2<br>Current spectacle use<br>AOR (95% CI)<br>p | Model 3<br>Annual eye examination<br>AOR (95% CI)<br>p | Model 4<br>Refractive intervention<br>AOR (95% CI)<br>p |
|--------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|
| Male (ref. female)                                     | 0.92 (0.60–1.39)<br>p = 0.685                  | 1.56 (0.94–2.58)<br>p = 0.083                         | 0.75 (0.50–1.13)<br>p = 0.167                          | 0.87 (0.57–1.34)<br>p = 0.535                           |
| 25–34 years                                            | 0.58 (0.29–1.17)<br>p = 0.125                  | 0.64 (0.29–1.43)<br>p = 0.278                         | 1.76 (0.97–3.19)<br>p = 0.061                          | 1.81 (0.96–3.40)<br>p = 0.064                           |
| 35–44 years                                            | 1.07 (0.52–2.20)<br>p = 0.863                  | 0.69 (0.29–1.65)<br>p = 0.402                         | 0.78 (0.38–1.62)<br>p = 0.503                          | 1.22 (0.58–2.57)<br>p = 0.597                           |
| ≥45 years                                              | 1.22 (0.60–2.50)<br>p = 0.585                  | 1.56 (0.64–3.81)<br>p = 0.327                         | 1.26 (0.62–2.54)<br>p = 0.526                          | 1.08 (0.49–2.41)<br>p = 0.848                           |
| University or above (ref. secondary or below)          | 0.79 (0.51–1.23)<br>p = 0.291                  | 1.02 (0.59–1.77)<br>p = 0.940                         | 1.01 (0.65–1.56)<br>p = 0.977                          | 0.70 (0.45–1.11)<br>p = 0.132                           |
| 5 000–9 999 SAR                                        | 0.81 (0.43–1.51)<br>p = 0.502                  | 0.72 (0.34–1.51)<br>p = 0.383                         | <b>0.53 (0.30–0.96)</b><br>p = 0.037                   | 0.79 (0.42–1.46)<br>p = 0.450                           |
| 10 000–14 999 SAR                                      | 0.99 (0.55–1.77)<br>p = 0.962                  | 1.31 (0.64–2.67)<br>p = 0.458                         | 0.74 (0.42–1.29)<br>p = 0.285                          | 1.00 (0.55–1.80)<br>p = 0.993                           |
| ≥15 000 SAR                                            | 0.98 (0.58–1.67)<br>p = 0.944                  | 0.92 (0.48–1.76)<br>p = 0.806                         | <b>0.48 (0.28–0.80)</b><br>p = 0.005                   | 0.63 (0.36–1.10)<br>p = 0.107                           |
| Self-reported refractive error (ref. none)             | 0.87 (0.58–1.31)<br>p = 0.501                  | <b>26.59 (16.25–43.51)</b><br>p < 0.001               | <b>3.43 (2.31–5.10)</b><br>p < 0.001                   | <b>4.32 (2.81–6.65)</b><br>p < 0.001                    |
| Healthcare provider as information source (ref. other) | 1.19 (0.75–1.87)<br>p = 0.456                  | 1.23 (0.71–2.11)<br>p = 0.466                         | <b>1.61 (1.05–2.48)</b><br>p = 0.030                   | 0.78 (0.49–1.26)<br>p = 0.310                           |
| Good knowledge, ≥80% (ref. < 80%)                      | —                                              | 1.07 (0.62–1.83)<br>p = 0.815                         | 1.08 (0.70–1.68)<br>p = 0.714                          | 0.77 (0.48–1.24)<br>p = 0.279                           |
| Systemic comorbidity (ref. none)                       | —                                              | —                                                     | —                                                      | 1.74 (0.95–3.19)<br>p = 0.072                           |
| Model fit                                              |                                                |                                                       |                                                        |                                                         |
| Events / N                                             | 134 / 513                                      | 221 / 513                                             | 187 / 513                                              | 152 / 513                                               |
| Omnibus test of coefficients                           | $\chi^2(10) = 5.98, p = 0.817$                 | $\chi^2(11) = 259.34, p < 0.001$                      | $\chi^2(11) = 56.93, p < 0.001$                        | $\chi^2(12) = 60.62, p < 0.001$                         |
| Cox & Snell R <sup>2</sup>                             | 0.012                                          | 0.397                                                 | 0.105                                                  | 0.111                                                   |
| Nagelkerke R <sup>2</sup>                              | 0.017                                          | 0.533                                                 | 0.144                                                  | 0.158                                                   |
| Hosmer–Lemeshow goodness of fit                        | $\chi^2(8) = 4.74, p = 0.785$                  | $\chi^2(8) = 9.11, p = 0.333$                         | $\chi^2(8) = 7.45, p = 0.489$                          | $\chi^2(8) = 5.36, p = 0.718$                           |
| Overall correctly classified (%)                       | 73.9                                           | 83.8                                                  | 68.0                                                   | 72.3                                                    |

Note. Values are adjusted odds ratios (AORs) with 95% confidence intervals and Wald p-values, obtained from four separate binary logistic regression models in which all listed predictors were entered simultaneously. Age group is referenced to 18–24 years and household income to <5 000 SAR. Cells marked “—” indicate that the predictor was not included in that model.

|     |                                                              |                                                                                                                                    |     |
|-----|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----|
| 477 | internal consistency (KR-20 = 0.42) necessitates cautious    | <b>Ethical Approval</b>                                                                                                            | 533 |
| 478 | interpretation of the composite score in conjunction with    | Ethical review and approval were granted by the Standing                                                                           | 534 |
| 479 | the item-level findings (Table 2, Figure 2). The cross-      | Committee for Scientific Research at Jazan University.                                                                             | 535 |
| 480 | sectional design also prevents any causal conclusions        | Participation was voluntary and preceded by electronic                                                                             | 536 |
| 481 | about the relationships observed.                            | informed consent (Reference No. REC-47/10/1840, dated                                                                              | 537 |
|     |                                                              | April 6, 2026). All study procedures followed institutional and                                                                    | 538 |
| 482 | <b>Clinical Implications and Future Research</b>             | national ethical standards and the principles of the Declaration                                                                   | 539 |
| 483 | Clinically, these findings suggest health education should   | of Helsinki to ensure transparency and completeness. Prior                                                                         | 540 |
| 484 | focus less on general awareness, which is already high,      | to participation, individuals were informed about the study                                                                        | 541 |
| 485 | and more on correcting specific dependency myths and         | objectives, confidentiality measures, and voluntary nature of                                                                      | 542 |
| 486 | encouraging routine eye examinations regardless of           | participation, and electronic informed consent was obtained.                                                                       | 543 |
| 487 | income. Future research should combine self-report with      |                                                                                                                                    |     |
| 488 | clinical refraction to confirm true undercorrection rates in | <b>Data availability</b>                                                                                                           | 544 |
| 489 | Jazan and should test whether targeted myth-correction       | All the data are available in the current manuscript.                                                                              | 545 |
| 490 | campaigns actually shift eye-care behavior over time.        |                                                                                                                                    |     |
| 491 | <b>Conclusion</b>                                            | <b>Author details</b>                                                                                                              | 546 |
| 492 | Adults in Jazan showed near-universal awareness of           | Faisal M. Tobaigy <sup>1</sup> , Abdulaziz A. Alagsam <sup>2</sup> , Eyad M. Albarrati <sup>3</sup> ,                              | 547 |
| 493 | spectacles and strong belief in their benefit, yet fewer     | Maisa M. Shanaq <sup>3</sup> , Murad A. Mobarki <sup>3</sup> , Khalid Y. Tawhari <sup>3</sup> ,                                    | 548 |
| 494 | than half currently wore them and only a third attended      | Ghadeer M. Haddadi <sup>3</sup> , Zahra S. Sumi <sup>3</sup> , Retaj A. Alameer <sup>3</sup> ,                                     | 549 |
| 495 | annual eye examinations. Composite knowledge showed          | Rahaf M. Kadomi <sup>3</sup> , Badria H. Shajiri <sup>3</sup> , Rakan M. Hakami <sup>3</sup> ,                                     | 550 |
| 496 | no meaningful link to sociodemographic factors, while        | Osama Nasser A Alayda <sup>4</sup> , Dalia H. Alsubhi <sup>4</sup> , Mhmud I.                                                      | 551 |
| 497 | lived experience of refractive error consistently predicted  | Almslmani <sup>4</sup>                                                                                                             | 552 |
| 498 | actual eye-care behavior. Misconceptions were more           | 1. Department of General Surgery, Faculty of Medicine,                                                                             | 553 |
| 499 | common for contact lenses than for spectacles, particularly  | Jazan University, Jazan, Saudi Arabia                                                                                              | 554 |
| 500 | around dependency and vision worsening. These findings       | 2. Cornea and External Eye Disease Consultant, Head of                                                                             | 555 |
| 501 | point to a specific, addressable target for public health    | Ophthalmology Center, Prince Mohammed bin Nasser                                                                                   | 556 |
| 502 | messaging in the region: correcting dependency myths         | Hospital, Jazan, Saudi Arabia                                                                                                      | 557 |
| 503 | and normalizing routine eye examinations, rather than        | 3. College of Medicine, Jazan University, Jazan, Saudi Arabia                                                                      | 558 |
| 504 | simply raising general awareness, which is already high      | 4. Faculty of Medicine, Tabuk University, Tabuk, Saudi                                                                             | 559 |
| 505 | among this population.                                       | Arabia                                                                                                                             | 560 |
| 506 | <b>List of Abbreviations</b>                                 | <i>Supplementary content (If any) is available online.</i>                                                                         | 561 |
| 507 | AOR Adjusted odds ratio                                      | <b>References</b>                                                                                                                  | 562 |
| 508 | CI Confidence interval                                       | 1. Little JA, Congdon NG, Resnikoff S, Braithwaite T,                                                                              | 563 |
| 509 | IQR Interquartile range                                      | Leasher J, Naidoo K, et al. Vision loss expert group of                                                                            | 564 |
| 510 | KAP Knowledge, attitude and practice                         | the global burden of disease study; GBD 2019 blindness                                                                             | 565 |
| 511 | KR-20 Kuder–Richardson Formula 20                            | and vision impairment collaborators. global estimates                                                                              | 566 |
| 512 | SAR Saudi Riyal                                              | on the number of people blind or visually impaired by                                                                              | 567 |
| 513 | SD Standard deviation                                        | uncorrected refractive error: a meta-analysis from 2000                                                                            | 568 |
| 514 | SPSS Statistical Package for the Social Sciences             | to 2020. Eye (Lond). 2024;38(11):2083–101.                                                                                         | 569 |
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| 523 | The authors declare that they have no competing interests    | global burden of disease study. Causes of blindness and                                                                            | 579 |
| 524 | or financial conflicts of interest related to this work.     | vision impairment in 2020 and trends over 30 years, and                                                                            | 580 |
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