Awareness and Attitude of Parents towards Children Suffering from a Squint: A Cross-Sectional Study

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Abstract

Background: Squint is a common ocular condition in children that can significantly impact their visual development, psychological well-being, and overall quality of life. Parents' awareness and attitudes toward the condition play a critical role in timely diagnosis and management. **Aim of the study:** This study aimed to assess the awareness and attitude of parents towards children suffering from a squint. **Subject and Method: Design:** A descriptive cross-sectional design was adopted. Study setting: It was conducted in the outpatient eye clinic of the Ophthalmology El Fayoum Hospital. A Convenience sampling of 365 parents of children in the outpatient clinic of the ophthalmology hospital was included in this study. Data were collected using two tools: **Tool I:** An interview questionnaire covering socio-demographic data, squint history, parental awareness (36 items), and attitudes. **Tool II:** The Pediatric Quality of Life Inventory (PedsQL) assesses physical, emotional, social, and school functioning. **Results:** The study revealed that 78.3% of parents had a satisfactory level of awareness, while 65.3% showed a positive attitude towards managing their child's squint. A significant relationship was found between parental attitudes and factors such as age, marital status, education level, income, and media usage ($P < 0.001$). Regarding children's quality of life, 57.5% were rated as having high QOL, 27.2% moderate, and 15.3% low. Common physical issues included difficulty in sports activities and low energy. Emotional and social aspects were also affected to varying degrees. **Conclusion:** The findings indicate that while the majority of parents are informed and supportive, there remains a substantial minority with limited awareness and negative attitudes. Socioeconomic and educational factors significantly influence parents responses, and enhancing parents education and access to information may improve early intervention and overall child well-being. **Recommendation:** Increase community awareness programs, especially in rural and low-education areas.

Keywords: Awareness, Attitude, Parents, Children, Squint

Introduction:

Visual disorders in children are increasingly recognized as a major public health issue. According to the ***World Health Organization (2023),*** over 285 million individuals have visual impairment globally, including 19 million children under the age of 14. Squint, one of the most common pediatric ocular conditions, affects approximately 4% of children in the United States. In Egypt, more than 120,000 children are estimated to be living with this condition.

The prevalence of eye disorders in children is increasing every day in different countries of the world. According to the WHO, over 285 million people are estimated to suffer from visual impairment worldwide. Of this, 19 million are estimated to be children under the age of 14 years ***(Assi et al., 2021).*** Globally, children dealing with the visual impairment known as childhood squint have a prevalence that ranges between 1.3% and 5.7% ***(Aleid et al., 2024).*** According to the American Association for Pediatric Ophthalmology and squint, an estimated 4% of children in the United States suffer from squint ***(Kumar et al., 2023).*** Most families are affected by squint because it typically manifests later in life. For Saudi Arabian children aged 1–14, the frequency of squint is 11.8%. ***(Aleid et al., 2024).*** In another study carried out in Riyadh, the Saudi Arabian capital, it involved 4886 strabismic patients who had undergone surgery. Of these patients, 69.3% had esotropia, while the remaining patients had exotropia, accounting for 69.3%, whereas exotropia accounted for 26.9% ***(Alobaisi et al., 2022)***. In another study done in Jazan among 385 participants, the prevalence of squint was 36.9% ***(Alobaisi et al., 2022).*** In another study about squint prevalence

throughout 10 years in a retrospective cohort study conducted in the United States was 60.1% for esotropia and 32.7% for exotropia ***(Herron et al., 2025).***

Squint is characterized by misalignment of the eyes and is a significant public health alarm due to its potential to cause functional visual impairments and psychosocial challenges for both the affected individual and their family. The pooled estimates from epidemiological studies have found that for all cases of squint , the prevalence is 1.93%; for exotropia, it is 1.23%; and for esotropia, it is 0.77%. ***(Dohlman et al., 2023).***

Squinting is caused by squint , a common disease in children. The effects on the child's vision, mentality, and mindset might be long-lasting if the condition is not addressed **(Shukla & Saxena, 2022).** In all, 6% of the world's population suffers from squint , 1.23% from exotropia, and 0.77% from esotropia. In industrialized nations, 5% of children younger than five years old have squint **(Herron et al., 2025).** It all depends on the fusional location; the deviation might be constant or intermittent, twisted in (incyclotropia), rotated out (excyclotropia), turned in (esotropia, ET), turned out (exotropia, XT), hypotropia (downward tilt), hypertropia (upward tilt), and so on. Worldwide, XT and ET deviations—the horizontal kind—are the most common in recorded clinical trials **(Alanazi et al., 2023).**

Parents' level of awareness is inversely proportional to the amount of social and psychological stress that squint causes in children; parents with higher levels of education tend to be more vigilant observers **(Sherief et al., 2023)**. Because they don't know what squint is and how it affects vision and stereoscopic perception, parents may

delay therapy. **Assaye et al. (2020)** emphasized the vital need for community-level health education on squint and its affects in preventing strabismic amblyopia and its related psychological effects. Within our target area, a prior study found that 71.5% of participants believed that squint is curable, and 52.8% of individuals correctly recognized squint . Awareness of squint treatability was also found to be statistically substantially associated with gender, age, employment status, and educational accomplishment. Most people who took part in the study knew what squint is and how it can affect them (**Alnuman et al., 2021).**

Community awareness, environmental risk factors, and socio-demographic distribution must be evaluated for squint control ***(Alanazi et al., 2023).*** Gaps of awareness and discrepancies among the reported studies could be attributed to differences in population, traditional, genetic, and demographic background, and the assessment tools ***(Alzuhairy et al. 2019).***

Parents awareness plays a key role in early detection and treatment outcomes. However, studies indicate a gap in awareness and positive attitudes among a significant proportion of parents. This study aims to evaluate the level of awareness, attitudes, and the quality of life of children with squint, providing valuable data for improving public health interventions in Fayoum, Egypt.

Significance of the Study:

Childhood squint is not only a visual concern but also a condition with significant psychological, functional, and social implications. Globally, the prevalence of childhood visual disorders, including squint, is increasing. According to the **World Health Organization (2023),** an estimated 19 million children under the age of 14 live with visual

impairments. In Egypt, approximately 120,000 children suffer from squint, making it a critical issue that affects many families.

Understanding the awareness and attitudes of parents is essential, as early diagnosis and effective management depend heavily on parents involvement. Despite a majority (78.3%) of parents demonstrating satisfactory awareness in this study, a notable 21.7% lack sufficient understanding. Furthermore, over one-third (34.7%) of parents displayed negative attitudes, which may hinder timely intervention and impact the quality of life of affected children. Children with squint also report functional challenges, particularly in physical activities, highlighting the need for a holistic approach to care.

This study is significant in guiding health education initiatives, informing policy development, and enhancing pediatric eye care services, particularly in underserved regions such as Fayoum.

Aim of the Study:

The primary aim of this study is to assess the awareness and attitude of parents towards children suffering from a squint through:

1. Evaluating the parents' awareness regarding squint in their children.
2. Assessing the parents' attitude toward their children diagnosed with squint.
3. Evaluating the health-related quality of life of children affected by squint using the Pediatric Quality of Life Inventory (PedsQL).

Research questions:

1. What is the level of parents' awareness of squint among children?
2. What is the parents' attitude toward their children diagnosed with squint.

3. What is the level of health-related quality of life in children?

Subject and Method:

Research design:

A cross-sectional study design (an observational study) was utilized to conduct this study (which is a type of research design in which the researcher collects data from many different individuals at a single point in time).

Study setting:

This study was conducted in the outpatient eye clinic of the Ophthalmology El Fayoum Hospital, that affiliated with the Ministry of Health, Fayoum government.

Sample:

Convenience sampling: the sampling population consists of 365 parents of children in the outpatient clinic of the ophthalmology hospital.

Sample size

The sample was composed of about 365, according to this power analysis equation.

$$n = \frac{N \times p\,(1\text{-}p)}{[[N - 1 \times (d^2 \div z^2)] + p\,(1\text{-}p)]}$$

N: Population target 7200
n: Sample 365
z: The standard score corresponding to the significance level 0.95 is equal to 1.96
d: The error rate is equal to 0.05
p: Property availability and neutral ratio = 0.50

$$\mathbf{n=}\ \frac{7200 \times 0.50\,(1 - 0.50)}{(7200 - 1 \times (0.05)^2 \div (1.96)^2 + 0.50\,(1 - 0.50)} = 365$$

Tools of data collection:

The researcher developed two tools after an extensive literature review to collect the pertinent data for the present study, as described below.

Tool I: An interviewing Questionnaire: it was developed by the researcher and composed of four parts:

Part I: (A): Socio-demographic characteristics of the parents, which included 11 closed ended questions (age, gender, relation to child, parents marital status, mother educational level, father educational level, father

occupation, mother occupation, number of rooms in the house, monthly income, and residence).

(B): Personal characteristics of the children, which included four closed-ended questions (age, gender, number of children, and arrangement between their siblings).

Part II: Parents history of squint which include seven multiple choice questions which included nine closed ended questions (family medical history, information source, who notice child squint, types of squint, when start the sign and symptoms, how was squint discovered in a child, are there other children in the family who suffer from squint, did the child suffer from vision problem, and does the child is squint level increase).

Part III: Parents awareness regarding squint which includes 10 multiple choice questions and 26 (yes or no) questions (definition of squint, squint may occur in, symptoms of squint, causes of squint, risk factors to develop a squint, complications of untreated squint, squint effects on social life, squint effects on family members, how can squint treated, from the point of view what is appropriate treatment, did you notice your child has squint……..etc).

Scoring system:

The scoring system for parents' awareness was calculated as follows: (1) score for know, and (0) for don't know. For each area of awareness, the score of the questions was summed up and the total divided by the number of questions, which converted into a percent score. The total awareness scores were calculated and ranged from 0-35, which were further categorized:

- Satisfied→ if the total score of awareness was >60% (>21 points).
- Unsatisfied→ if the total score of awareness was ≤ 60% (≤21 points).

Part IV: Parents' attitude towards their children who have squint. It was divided into five categories.

1. Belief-related questions which included five items (parents' love for child is affected negatively due to squint, parents have adequate awareness regarding squint, parents should take their squint child to an eye doctor once the child gets older, parents consult an eye doctor as squint child is a stigma to the family, and squint child should be shown to a traditional healer).

2. Barriers face parents regarding squint in a child which included five items (parents do not treat their child with squint due to the high cost, parents do not treat their child with cross-eye due to fear of surgery, refractive error is the main reason to take the child to an eye doctor for treatment, parents do not treat their child with squint due to failure of surgery, and parents do not care for squint in their child so do not consult eye doctors).

3. Current sources of information about cross-eye and its management, which included four items (doctors or healthcare workers, friends/family members, social media, and search engines),

4. Preferred sources of information about cross-eye and its management, which included four items (doctors or healthcare workers, friends/family members, social media, and search engines), and

5. Can squint be prevented?

3. **The current sources of information about cross-eye and its management,** which included four categories: doctors or healthcare workers, friends or family members, social media, and search engines; 4. the preferred sources of information, which included the same four categories; and 5. Whether squint can be prevented.

The scoring system for total attitude was:

The scoring system for parents' attitude was calculated as (1) scores for yes, and (0) for no. A percentage score was obtained for each attitude category by adding together the question scores and then dividing the total by the total number of questions. The total attitude scores were calculated and ranged from 0-19, which were further categorized:

- **Positive**→ if the total score of attitude was >60% (>11 points).
- **Negative**→ if the score was ≤ 60% (≤ 11 points).

Tool II: The Pediatric Quality of Life Inventory (PedsQL) is a brief measure of health-related quality of life in children. The 23 items in the PedsQL comprise four Generic Core Scales:

1. **Physical functioning which included eight items** (pain or burning sensation in the eyes to squint, difficult to walk, difficult to run, difficult to do sports activity/exercise, difficult to lift something heavy, difficult to take shower by him/ her self, difficult to do chores around the house, hurt or ache, and low energy).
2. **Psychosocial health, which included four items** (difficult interaction within social and school environments, feelings of sadness and inferiority, sensory perception, and daily life limitations).
3. **Emotional health functioning, which included five items** (afraid or scared, sad, angry, trouble sleeping, and worry about what would happen to him/her).
4. **Social functioning which included five items** (trouble getting along with other kids, other kids do not want to be a friend, other kids tease me, cannot do things that other kids her/his age can do, and it is hard to keep up when his/ her play with other kids).
5. **School functioning, which included seven items** (difficulty in reading, difficulty in depth perception (stereopsis), forgetting things,

difficulty paying attention in class, trouble keeping up with school work, missing school because of not feeling well, and missing school to go to the doctor or hospital).

The scoring system for the Pediatric Quality of Life Inventory was:

The scoring system for Pediatric Quality of Life Inventory was calculated as (4) for almost always, (3) for often, (2) for sometimes, (1) for almost never, and (0) for never. The mean score for each component of quality of life was determined by adding up the scores of all the questions in that area and then dividing the total by the total number of questions. The total score of quality of life was calculated and ranged from 0-116, which was further categorized:

- **High**→ if the total score of quality of life was >75% (>87 points).
- **Moderate**→ if the total score equals 50-75% (58-87 points).
- **Low**→ if the total score was < 50% (<58 points).

Content validity:

Validity was ascertained by a group of 3 experts in the branch of Community health nursing, Faculty of Nursing, Fayoum University. The expertise reviewed the tools for formatting, layout, consistency, accuracy, and relevancy.

Content reliability:

Reliability was tested statistically using the appropriate statistical tests to ensure that the tools were reliable before data collection, were 0.965, 0.945, and 0.966, respectively.

Ethical Consideration:

Before the pilot study, ethical approval was obtained from Fayoum University Supreme Ethical Committee for Scientific Research Ethics, and it was assured that confidentiality and privacy were considered, and each

mother had the right to withdraw from the study at any time.

Pilot Study:

The tools were pilot tested on 10% (at least 36 parents) of the study's total population to ensure they were applicable, clear, and efficient. Based on the results, the tools were fine-tuned.

Preparatory Phase:

As part of this process, I searched through books, journals, the internet, magazines, and periodicals to gain a theoretical understanding of the study's many facets and to build methods for data collecting.

Field work:

- The researcher met with the ophthalmology department heads to provide an overview of the study's goals and methods of data collection after obtaining formal approval to carry it out. To ensure their consent and participation in the data gathering process, they were provided with copies of the relevant forms.
- The researcher met the parent and explained the purpose of the study. After the agreement was reached, approval was obtained from each parent selected in the study.
- Every parent was interviewed to collect the required data and to assess the awareness, attitudes and quality of life of each parent through a questionnaire.
- Educate the parent about the appropriateness and effectiveness of the treatment.
- Data collection was done two day/week from December 2023 to the end of May 2024 at time 9 to 1 o'clock by the investigator.

Administrative design:

All three of the stated maternity and child health care centers, as well as Fayoum University's dean of the nursing faculty, gave their approval for this study to proceed.

Statistical design:

Appropriate statistical tests were employed to determine the significance of the findings, and the examined data were presented in numerical and percentage forms, as well as in tables, figures, and diagrams, if needed.

What follows is an analysis of the observed difference and associated associations: statistical significance P < 0.05* and highly statistically significant (P < 0.001), statistically insignificant (P > 0.05).

Results:

Table (1): Shows that the highest percentage in the age category is among those aged 20–30 years, representing 43.3% of the participants. For gender, males account for 71.1%, which is nearly three-quarters of the sample. Regarding the relationship to the child, parents make up the majority at 76.1%. In terms of marital status, 58.9% are married, which is more than half. The most common educational level among mothers is secondary school (41.1%), and similarly for fathers, 41.9% have completed secondary education. For occupation, the largest group among fathers is those engaged in free work (52.5%), while 54.7% of mothers are housewives, both representing more than half in their respective categories. When it comes to housing, 56.7% of families live in one-room homes, the highest among the room categories. Regarding monthly income, 63.6% report that their income is enough, which is nearly two-thirds of the sample. For residence, urban areas account for 58.1% of the respondents. Among media sources, the internet is the most used, accessed by 42.8%, followed by TV, video, and radio at 35.0%, 17.2%, and 5.0%, respectively.

Figure (1): Shows that 78.3% of parents have a satisfactory level of awareness regarding squint, while

21.7% are unsatisfied with their understanding.

Figure (2): Presents that 65.3% of parents have a positive attitude toward managing their child's squint, while 34.7% hold a negative attitude. This suggests that although the majority are supportive and proactive, a significant portion may have reservations or misconceptions regarding the condition.

Figure (3): The overall quality of life (QOL) of children with squint is rated as high by 57.5% of parents, while 27.2% report a moderate QOL, and 15.3% indicate a low QOL.

Table (2): Presents significantly influences awareness levels, with younger individuals (ages 20-30) demonstrating higher awareness (84.0% satisfied) compared to older groups, a finding with a high statistical significance ($\chi^2 = 22.298$, $P < 0.001$). Gender does not significantly affect awareness levels, as indicated by a non-significant ($\chi^2 = 1.637$, $P = 0.201$). Mother's educational level is strongly associated with awareness about squint. Higher educational attainment among mothers correlates with increased awareness, with a significant ($\chi^2 = 23.726$, $P < 0.001$). Similarly, the father's educational level shows a significant correlation, where higher education levels are linked to greater awareness about squint ($\chi^2 = 23.632$, $P < 0.001$). The father's occupation also impacts awareness levels, with employed fathers associated with higher awareness ($\chi^2 = 11.775$, $P = 0.003$). Mother's occupation reveals a significant relationship with awareness levels, where those with employed mothers report higher awareness ($\chi^2 = 11.714$, $P < 0.001$). Monthly income is another significant factor, with individuals who consider their income sufficient having greater awareness about squint ($\chi^2 = 75.220$, $P < 0.001$). Residence plays a significant role as well, with urban residents showing

higher awareness compared to rural residents (χ^2= 39.633, P < 0.001). Media usage also affects awareness, with higher awareness levels associated with frequent use of the internet (χ^2= 28.289, P < 0.001).

Table (3): Shows a significant impact on attitudes, with individuals aged 20-30 exhibiting a lower percentage of satisfaction (67.3%) compared to those aged 31-40 (72.7%) and a higher percentage of dissatisfaction in the 41-50 age group (57.4%). This difference is statistically significant (χ^2= 17.597, P < 0.001).

Table (4): Explores is a significant positive correlation between total awareness and total attitude (r = 0.427, P < 0.001), indicating that greater awareness about squint is associated with more positive attitudes towards the condition, and A significant positive correlation exists between total awareness and total QOL (r = 0.384, P < 0.001), suggesting that increased awareness about squint is linked to a better quality of life. Also, the correlation between total attitude and total QOL is significant (r = 0.425, P < 0.001), showing that more positive attitudes towards squint are associated with a higher quality of life.

Table (5): Reveals that 50.3% of parents believe their love for their child is affected negatively due to squint, and 50.3% think a traditional healer should be consulted, reflecting a split in beliefs. The main barriers parents face in treating squint are the high cost (69.4%) and fear of surgery (69.2%). Most parents (70.3%) currently rely on doctors and healthcare workers for information about squint, but they overwhelmingly prefer this source (84.2%) for future guidance.

Table (6): Presents that difficulty in reading* is never a problem for 45.3% of children, and *depth perception issues* are never a problem for 38.6%,

but *forgetting things* is almost never an issue for 36.7%. On the other hand, only 0.6% of children miss school almost always due to not feeling well, while *difficulty keeping up with school work* is a frequent problem for 15.8%.

Table (1): Socio-demographic characteristics of parents in the study sample (n=360)

Items	N	%
Age		
20-30	156	43.3
31:40	143	39.7
41:50	61	16.9
Mean ± SD	32.36±7.3	
Gender		
Male	256	71.1
Female	104	28.9
Relation to child		
Parent	274	76.1
Sibling	48	13.3
Grand parent	33	9.2
Other	5	1.4
Parents marital status		
Widow	66	18.3
Divorced	82	22.8
Married	212	58.9
Mother Educational level		
Illiterate	50	13.9
Primary	71	19.7
Secondary	148	41.1
University	91	25.3
Father Educational level		
Illiterate	41	11.4
Primary	73	20.3
Secondary	151	41.9
University	95	26.4
Father Occupation		
Employed	166	46.1
Free work	189	52.5
Retired	5	1.4
Mother Occupation		
House wife	197	54.7
Employed	163	45.3
Number of rooms in the house		
1	204	56.7
2	140	38.9
3	16	4.4
Monthly Income		
Enough	229	63.6
Not enough	131	36.4
Residence		
Urban	209	58.1
Rural	151	41.9
Media		
Radio	18	5.0
Tv	126	35.0
Video	62	17.2
Internet	154	42.8

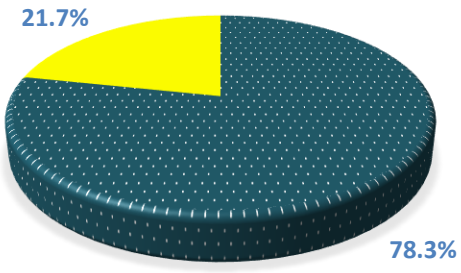

Figure (1): Parents' Awareness about Squint

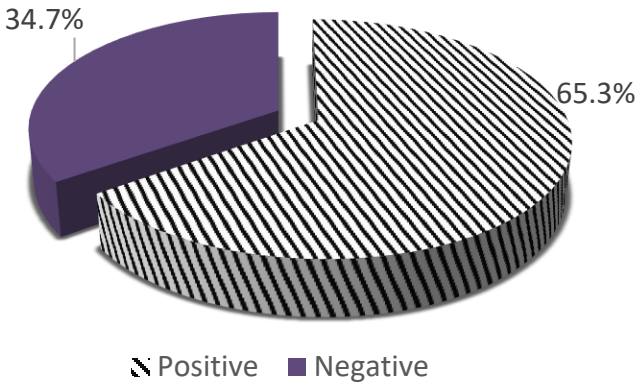

Figure (2): Overall Parents' Attitude Towards Children with Squint

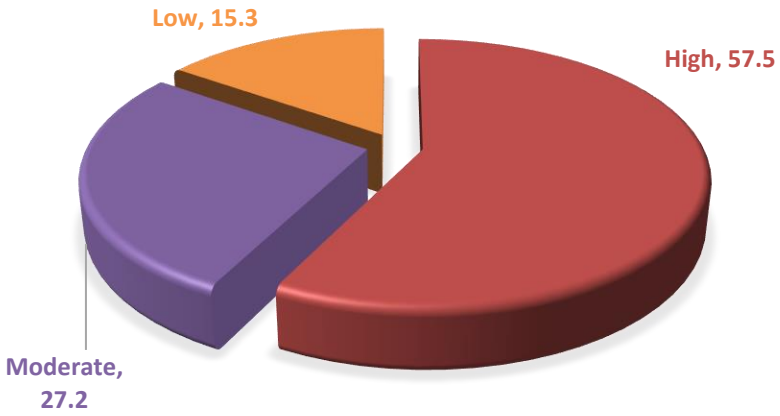

Figure (3): Overall Quality of Life Assessment for Individuals with Squint

Table (2): Association Between Total Parents' Awareness About Squint and Their Demographic Factors

Items	Total Awareness					
	Satisfied		Unsatisfied		Test of significance	
	N	%	N	%	X^2	P-value
Age						
20-30	131	84.0	25	16.0	22.298	<0.001*
31:40	117	81.8	26	18.2		
41:50	34	55.7	27	44.3		
Gender						
Male	196	76.6	60	23.4	1.637	0.201
Female	86	82.7	18	17.3		
Parents marital status						
Widow	48	72.7	18	27.3	2.242	0.326
Divorced	68	82.9	14	17.1		
married	166	78.3	46	21.7		
Mother Educational level						
Illiterate	31	62.0	19	38.0	23.726	<0.001*
Primary	46	64.8	25	35.2		
Secondary	125	84.5	23	15.5		
University	80	87.9	11	12.1		
Father Educational level						
Illiterate	28	68.3	13	31.7	23.632	<0.001*
Primary	44	60.3	29	39.7		
Secondary	129	85.4	22	14.6		
University	81	85.3	14	14.7		
Father Occupation						
Employed	142	85.5	24	14.5	11.775	0.003*
Free work	135	71.4	54	28.6		
Retired	5	100.0				
Mother Occupation						
House wife	141	71.6	56	28.4	11.714	<0.001*
Employed	141	86.5	22	13.5		
Monthly Income						
Enough	212	92.6	17	7.4	75.220	<0.001*
Not enough	70	53.4	61	46.6		
Residence						
Urban	188	90.0	21	10.0	39.633	<0.001*
Rural	94	62.3	57	37.7		
Media						
Radio	11	61.1	7	38.9	28.289	<0.001*
Tv	82	65.1	44	34.9		
Video	51	82.3	11	17.7		
Internet	138	89.6	16	10.4		

Table (3): Association Between Parents' Attitude Towards Squint and Their Demographic Factors

Items	Total attitude					
	Satisfied		Unsatisfied		Test of significance	
	N	%	N	%	X^2	P-value
Age						
20-30	105	67.3	51	32.7	17.597	<0.001*
31:40	104	72.7	39	27.3		
41:50	26	42.6	35	57.4		
Gender						
Male	160	62.5	96	37.5	3.017	0.082
Female	75	72.1	29	27.9		
Parents marital status						
Widow	44	66.7	22	33.3	14.130	<0.001*
Divorced	67	81.7	15	18.3		
married	124	58.5	88	41.5		
Mother Educational level						
Illiterate	20	40.0	30	60.0	49.630	<0.001*
Primary	46	64.8	25	35.2		
Secondary	125	84.5	23	15.5		
University	44	48.4	47	51.6		
Father Educational level						
Illiterate	20	48.8	21	51.2	41.683	<0.001*
Primary	41	56.2	32	43.8		
Secondary	127	84.1	24	15.9		
University	47	49.5	48	50.5		
Father Occupation						
Employed	112	67.5	54	32.5	3.686	0.158
Free work	118	62.4	71	37.6		
Retired	5	100.0				
Mother Occupation						
House wife	131	66.5	66	33.5	0.286	0.593
Employed	104	63.8	59	36.2		
Monthly Income						
Enough	186	81.2	43	18.8	70.589	<0.001*
Not enough	49	37.4	82	62.6		
Residence						
Urban	162	77.5	47	22.5	32.904	<0.001*
Rural	73	48.3	78	51.7		
Media						
Radio	8	44.4	10	55.6	22.635	<0.001*
Tv	66	52.4	60	47.6		
Video	42	67.7	20	32.3		
Internet	119	77.3	35	22.7		

Table (4): Correlation Between Parents' Awareness, Attitude, and Quality of Life in Individuals with Squint

	Total awareness		Total attitude	
	r	P-value	r	P-value
Total attitude	0.427	<0.001*		
Total QOL	0.384	<0.001*	0.425	<0.001*

Table (5): Parents' Attitudes Towards Children with Squint

The attitude of parents towards their children has squint	Yes		No	
	N	%	N	%
Belief-related questions				
Parents' love for their child is affected negatively due to a squint.	181	50.3	179	49.7
Parents have adequate awareness regarding squint.	221	61.4	139	38.6
Parents should take their squint child to an eye doctor once the child gets older.	246	68.3	114	31.7
Parents consult an eye doctor as squint child is a stigma to the family.	219	60.8	141	39.2
A squinting child should be shown to a traditional healer	181	50.3	179	49.7
Barriers faced by parents regarding squint in a child.				
Parents do not treat their child with a squint due to the high cost.	250	69.4	110	30.6
Parents do not treat their child with crossed eyes due to the fear of surgery	249	69.2	111	30.8
Refractive error is the main reason to take a child to an eye doctor for treatment	210	58.3	150	41.7
Parents do not treat their child with squint due to the failure of the surgery	221	61.4	139	38.6
Parents do not care for a squint in their child, so they do not consult eye doctors.	171	47.5	189	52.5
Current sources of information about cross-eye and its management				
Doctors or healthcare workers	253	70.3	107	29.7
Friends / Family members	257	71.4	103	28.6
Social Media	230	63.9	130	36.1
Search engines	254	70.6	106	29.4
Preferred sources of information about cross-eye and its management				
Doctors or healthcare workers	303	84.2	57	15.8
Friends / Family members	254	70.6	106	29.4
Social Media	278	77.2	82	22.8
Search engines	228	63.3	132	36.7
Can squint be prevented	250	69.4	110	30.6

Table (6): Impact of squint on school functioning

Quality of life	never a problem		almost never a problem		sometimes a problem		often a problem		Almost always a problem	
	N	N	N	N	N	%	%	N	N	%
School functioning										
Difficulty in reading	163	45.3	90	25.0	35	9.7	64	17.8	8	2.2
Difficulty in depth perception (stereopsis)	139	38.6	111	30.8	31	8.6	75	20.8	4	1.1
Forget things	99	27.5	132	36.7	59	16.4	61	16.9	9	2.5
Difficulty paying attention in class	90	25.0	121	33.6	78	21.7	66	18.3	5	1.4
Trouble keeping up with school work	83	23.1	126	35.0	87	24.2	57	15.8	7	1.9
Miss school because of not feeling well	77	21.4	112	31.1	97	26.9	72	20.0	2	0.6
Miss school to go to the doctor or hospital	69	19.2	130	36.1	77	21.4	68	18.9	16	4.4

Discussion

Squint is a condition characterized by misalignment of the eyes, where they are not properly aligned with each other. This misalignment can be constant or intermittent and may occur in one or both eyes. While squint is often considered a cosmetic concern, its impact extends beyond appearance, affecting visual development and quality of life in individuals of all ages **(Zhao, 2025).**

The results reveal that 78.3% of parents demonstrate a satisfactory level of awareness about squint, while 21.7% report an unsatisfactory understanding. These findings suggest that although the majority of parents possess an acceptable awareness of squint, a significant minority remains inadequately informed. This pattern is consistent with recent studies (**Al-Haddad et al., 2022; Ghassemi et al., 2020**), which reported that while general awareness of squint among parents is moderately high, detailed knowledge—especially regarding risk

factors, early signs, and treatment options—remains suboptimal.

Regarding to overall parents' attitude towards children with squint, the findings indicate that 65.3% of parents exhibit a positive attitude toward managing their child's squint, while 34.7% display a negative attitude. This suggests that although the majority of parents are supportive and proactive regarding treatment and management, a significant portion still harbors reservations, misconceptions, or cultural biases toward addressing the condition. Similar trends have been reported in recent studies (**Al-Haddad et al., 2022; Abdallah et al., 2023),** which found that parental attitudes toward squint are influenced by factors such as cultural beliefs, fear of medical intervention, financial concerns, and limited understanding of treatment outcomes.

Positive parental attitudes are essential for early diagnosis and adherence to treatment plans, which significantly affect the visual and psychosocial prognosis of children with squint (**Tawfik et al., 2021**). However, the presence of a sizable proportion with negative attitudes highlights persistent challenges. As **Ghassemi et al. (2020**) noted, parents who have misconceptions or negative perceptions are less likely to seek timely medical care, potentially delaying critical interventions.

The data on the quality of life (QOL) of children with squint reveals that 57.5% of parents rate their child's QOL as high, with 27.2% reporting a moderate QOL and 15.3% indicating a low QOL. These findings suggest that while the majority of children with squint experience a good quality of life, a significant minority report experiencing challenges that might impact their overall well-being. The fact that 57.5% of parents rate their child's QOL as high is consistent with

findings in recent literature, where squint was not seen as a major barrier to overall life satisfaction for most children, especially when early diagnosis and treatment interventions are available. For instance, **Al-Haddad et al. (2024)** found that children with squint who received appropriate medical care and psychosocial support experienced less emotional distress, contributing to higher QOL scores. However, the 27.2% of parents reporting moderate QOL and 15.3% reporting low QOL suggest that a significant portion of children may face challenges associated with squint, which may affect their social interactions, academic performance, and emotional well-being. These children might face psychosocial issues such as low self-esteem or teasing, which can contribute to a reduced quality of life. Research by **Ghassemi et al. (2023)** supports this, indicating that visible conditions like squint can have psychosocial repercussions, affecting children's confidence and emotional health.

The results of the study reveal significant positive correlations between awareness, attitude, and quality of life (QOL) for children with squint. The findings suggest that increased awareness about the condition is associated with more positive attitudes and a better quality of life, emphasizing the importance of education and awareness in improving outcomes for individuals affected by squint. A significant positive correlation was found between total awareness and total attitude ($r = 0.427$, $P < 0.001$). This indicates that as parents or caregivers gain more awareness about squint, their attitudes toward the condition become more positive. These results are consistent with research by **Al-Haddad et al. (2024),** who highlighted that when individuals are well-informed about

visual conditions like squint, they are more likely to approach the condition with understanding and optimism. Educational interventions and awareness campaigns have been shown to significantly shift public perception, making it more likely that parents will take proactive steps in seeking treatment and providing emotional support to their children. The study also found a significant positive correlation between total awareness and total quality of life ($r = 0.384$, $P < 0.001$). This suggests that individuals with greater awareness of squint experience a better quality of life. This finding is supported by **Ghassemi et al. (2023)** found, families with a positive mindset and supportive outlook are better able to address the emotional and psychological challenges associated with squint, which in turn fosters a higher quality of life for their children. Encouraging positive attitudes is crucial in managing not only the visual aspects of squint but also the psychosocial effects.

These findings underscore the importance of educational efforts in improving both awareness and attitude towards squint. Public health campaigns, parental workshops, and educational materials can be critical in promoting accurate information about the condition, available treatments, and potential outcomes. Furthermore, fostering a positive attitude towards the condition is essential to improving the overall experience of those affected by squint. This could be achieved through peer support groups, psychological counseling, and community programs aimed at reducing stigmatization and enhancing coping strategies. In conclusion, the significant correlations observed between awareness, attitude, and quality of life highlight the critical role of both awareness and a positive mindset in improving outcomes for

children with squint. Efforts to enhance awareness and encourage positive attitudes can play a pivotal role in improving the quality of life for children with this condition. This research suggests that addressing both educational and psychosocial aspects is key to achieving better health outcomes for individuals affected by squint.

The current study examined how various demographic factors relate to total awareness about squint among parents and caregivers. The findings reveal that age, education, occupation, income, residence, and media usage all play significant roles in influencing awareness levels about squint. Age significantly impacts awareness, with younger parents (20–30 years) demonstrating higher satisfaction with their awareness about squint (χ^2 = 22.298, P < 0.001). Similar results were found by **Elmasry et al. (2024),** reporting that working mothers in particular were more proactive in seeking healthcare services for their children. Monthly income strongly affects knowledge ($\chi 2$ = 75.220, P < 0.001), with those reporting sufficient income showing greater knowledge. Financial resources facilitate better access to healthcare, education, and informational resources. Similar findings were reported by **Salem et al. (2023),** emphasizing the transformative role of digital platforms in enhancing parental knowledge regarding childhood health issues, particularly visual impairments. In summary, younger age, higher education, employment, higher income, urban residence, and frequent media usage are key factors associated with greater knowledge about squint. These findings highlight the need for targeted health education interventions, particularly for older, less-educated, rural, and lower-income groups, to ensure early detection,

appropriate management, and improved outcomes for children with squint.

This study investigated the relationship between demographic characteristics and attitudes toward squint among parents and caregivers. Several significant associations were observed, particularly concerning age, marital status, education, income, residence, and media use. Age significantly affects parental attitudes toward squint ($\chi^2 = 17.597$, $P < 0.001$). Parents aged 31–40 showed the highest positive attitudes, whereas dissatisfaction was greater among those aged 41–50. This trend is consistent with **Moussa et al. (2023),** who found no significant gender-based differences in health-related attitudes towards childhood ocular conditions, suggesting that both fathers and mothers similarly value interventions for their children's eye health. Marital status emerged as a significant factor, with divorced parents showing the highest satisfaction regarding squint management attitudes ($\chi^2 = 14.130$, $P < 0.001$). This may reflect increased vigilance and responsibility among divorced parents, as observed by **Salem et al. (2023),** emphasizing that educated parents are more aware of the benefits of early diagnosis and intervention for squint. Father's occupation showed some influence on attitudes, though not statistically significant ($P = 0.158$). Similarly, mother's occupation did not significantly impact attitudes ($P = 0.593$). These findings align with **Farag et al. (2024),** who noted that while employment may enhance access to resources, it does not always directly translate into stronger health attitudes without concurrent educational support. Monthly income was a significant determinant of parental attitudes ($\chi^2 = 70.589$, $P < 0.001$). Parents who perceived their income as sufficient had more positive attitudes towards squint

management. According to **Mahmoud et al. (2024),** internet platforms provide easier access to up-to-date medical knowledge and patient stories, which can positively influence parental perspectives and decision-making regarding treatment options.

Conclusion:

This study highlights the significant level of awareness and generally positive attitudes among parents of children suffering from squint who attended the ophthalmology outpatient clinic at El Fayoum Hospital. The findings demonstrate a strong correlation between parents' awareness, supportive attitudes, and the improved quality of life in affected children. Media emerged as a key influence in shaping parental awareness, underscoring the importance of effective communication strategies. Despite these encouraging results, gaps remain, particularly in communities with limited educational resources. Addressing these disparities through targeted awareness campaigns and healthcare provider training could foster earlier detection and intervention, ultimately enhancing health outcomes for children with squint.

Recommendations Based on Study Findings:

- Increase community awareness programs, especially in rural and low-education areas.
- Utilize media and social platforms to spread accurate information about squint.
- Integrate visual health education into maternal and child health programs.
- Train primary healthcare providers for the early detection of squint and timely referrals.
- Promote further research on educational interventions and

evaluate their effectiveness in improving awareness and attitudes.

- Awareness and Attitudes Toward Squint in Children: A Cross-Sectional Study

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