Original Article

Parental Awareness Regarding Ocular Disorders and Requisite Eye Care for Children of Parents Visiting RMU & Allied Hospitals.

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Author's Contribution

[1]*Conception of study*
[2]*Experimentation/Study Conduction*
[4,5]*Analysis/Interpretation/Discussion*
[3]*Manuscript Writing*
[6]*Critical Review*
[6]*Facilitation and Material Analysis*

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Abstract

Background: Early detection and parental education regarding pediatric eye conditions and eye care are essential due to the serious consequences that can arise, as well as the availability of preventive measures. The purpose of this study was to assess parents' attitudes and degree of understanding regarding eye problems in children.

Objectives: To Assess Awareness, Knowledge & Practice Regarding Ocular Disorders and Requisite Eye Care of Children among the Parents Visiting RMU & Allied Hospitals.

Materials and Methods: This descriptive cross-sectional study was carried out on a sample of 380 parents visiting RMU & Allied Hospitals. within a duration of 3 months by an interview-based questionnaire administered to only parents who had at least one child aged 15 or younger. The questionnaire had 4 parts: socio-demographic data, knowledge about eye care, knowledge about eye diseases, and eye care practices.

Results: A total of 380 parents participated in this research, out of which 98.1% had inadequate knowledge about eye care, and only 1.8% had adequate knowledge. Regarding symptoms that prompt parents to take their child to an eye specialist, eye redness had the highest percentage (47.1%), and the most common barrier in accessing eye care services is a doctor's fee (57.9%)

Conclusion: The findings of our study show that people have insufficient awareness regarding eye care and eye health, yet eye care practices are substantially better. Except for education, all demographic factors have an equitable distribution of knowledge about eye care. We need to enhance people's knowledge of eye health care to reduce the burden of eye disorders in our society and their accompanying consequences.

Keywords: Children, eye care, eye diseases, knowledge, practice, awareness.

Introduction

A child's vision development is crucial between the ages of 0 and 12 since vision affects a child's ability to learn, and pediatric eye issues affect a child's growth and future opportunities.[1] There are an estimated 1.5 million blind children in the world, with developing nations accounting for three-quarters of them.[2] In Pakistan, previous studies have shown that among ocular diseases, cataracts, refractive errors, amblyopia, and strabismus are prevalent.[3] Parents are the major decision-makers for their children's health care needs. Understanding why some parents seek care for their children with eye disorders depends on their perception and awareness of the issue.

Overseas, a Nigerian study found that parental awareness about spectacle-requiring eye conditions was 71.4%; 51.4% linked them with poor school performance.[4] 3.1% of the respondents in Saudi Arabia (Jazan Region) had good awareness of Amblyopia, and 54.5% had poor awareness.[5] Only 9% of parents were aware of pediatric visual problems in South India.[6] In the Indian Subcontinent, the greatest concern parents had was the development of squint and the setting in of social implications thereof[7] Al Qunfudhah Governorate: 65% of the respondents got their children examined, while 48.9% had a positive attitude towards child eye care. Nonetheless, 60% did not know much about eye care or the importance of regular eye checkups. Moreover, 91.9% were poorly knowledgeable about eye problems.[8] Nationwide research carried out in the Swat district revealed that 56% of parents were aware of eye disorders; amblyopia (23.6%) and refractive errors (50.9%) were among the common difficulties.[9] In a 2011 Bangladesh study, most parents linked blindness to vitamin A deficiency, some to infections, and half thought childhood cataracts were untreatable.[10] Participants from Riyadh, Saudi Arabia, with a university education had significantly higher knowledge (64.4 %), and no other subgroup had the highest awareness (> 7.25 %); this top quarter belonged to the retired outfit. This was followed by medical field workers.[11]

About the instructors in Rawalpindi, 35.89% had some knowledge about eye disorders in children, and 49.89% had some knowledge.[12]

In a recent study from one of Pakistan's major cities, 51.5% of school-aged children were found to have high myopia, suggesting a significant gap in parental awareness regarding the condition and its potential consequences.[13] According to a study conducted in the rural and urban areas of Rahim Yar Khan district of Pakistan, poor health literacy often leads to delayed eye care, as unaware parents may overlook the need for early exams or hold false beliefs.[14]

According to research in Pakistan, an estimated 0.9% of Pakistan's population—around 1.25 million people—are blind, many of whom are under 20. Providing specialized education and training is essential to support their future contribution to society.[15]

The purpose of this study was to assess parents' knowledge of common eye conditions, their assessment of their children's eye health, and their comprehension of routine screenings. Even with advancements in medicine, early prevention still

depends on parental awareness. Therefore, to gauge parental awareness of ocular diseases in children, we carried out a descriptive cross-sectional study.

Materials and Methods

A descriptive cross-sectional study was carried out on attendants or patients of non-ocular diseases visiting RMU and allied hospitals. The duration of our study was 3 months.

The previous prevalence of knowledge was 56% as reported by a study conducted at Tehsil Babuzai, District Swat, Pakistan. The sample of our study was 380, using the prevalence of 56% from the previous study, with a confidence interval of 95%, and an absolute precision of 0.05% was calculated using the WHO sample size calculator.[9] The sampling technique used was non-probability consecutive.

Data was collected from parents visiting the outdoor patient department with informed consent through a structured, self-administered questionnaire. Before data collection, parents explained the purpose of the research, and they were assured of the confidentiality of their data. We collected data from parents who had at least one child less than 12 years of age. We excluded all the parents who were related to the health care profession or whose child already had an existing eye disease.

The structured questionnaire was translated into an Urdu version. The questionnaire was then verified by an ophthalmologist. We had the questionnaire in printed form, and we filled all the forms by asking and explaining each question to parents. The questionnaire comprised four parts; the first part was of parental demographic data, such as gender, age, setting, education, occupation, and income, so we can see if there's any correlation between parental awareness about ocular diseases and different socio-demographic factors. The second and third parts of the questionnaire were regarding parental eye care & eye disease knowledge. This part had 19 questions to assess the knowledge of parents. We gave 1 mark for the correct option, and those questions with multiple correct answers were given 1 mark for each correct option, which resulted in a total score of 58 for 19 items. A score from 0 to 28 was considered inadequate knowledge, and a score higher than 29 was considered adequate knowledge. The fourth part of the questionnaire was about eye care practices with 12 items. Data was analyzed using statistical software Statistical Product and Service Solutions (SPSS version 27). The sample characteristics were analyzed using descriptive statistics, and categorical variables were represented as frequency and percentage. Data was analyzed to assess the knowledge of parents and their eye care practices. The scores were grouped as adequate knowledge and inadequate knowledge. A compilation of data was tallied and shown using 2x2 tables and bar graphs. To make deductions, the chi-square was employed. For variables where the chi-square test couldn't be applied, we used the Fisher test. A value of $p < 0.05$ as the level of significance and a 95% confidence interval were adopted for all analyses.

Results

A total of 380 people were included in the research. 38.4% of the population were between 20 and 30 years of age, whereas only 1.3% belonged to the age group of 50 to 60 years. 31.1% of the population was unemployed, and most of the employed ones were government employees (24.5%). About 40% of the people have an income between 20 to 30,000, whereas only 6.1% have an income of more than 60,000.

Only about 1.8% of the parents had adequate knowledge about eye diseases, whereas 98.2% of the parents had inadequate knowledge about pediatric eye diseases. The knowledge score is correlated with several determinants, shown in Table 1.

Knowledge about eye diseases is evenly distributed among all variables except education, with a significant value of 0.018. People with higher education have been shown to have better knowledge of eye care. All other variables, gender (p=1.000), setting (p=0.261), age(p=0.478), occupation(p=0.380), and income (p=0.373), showed no significant effect on the knowledge score about eye diseases.

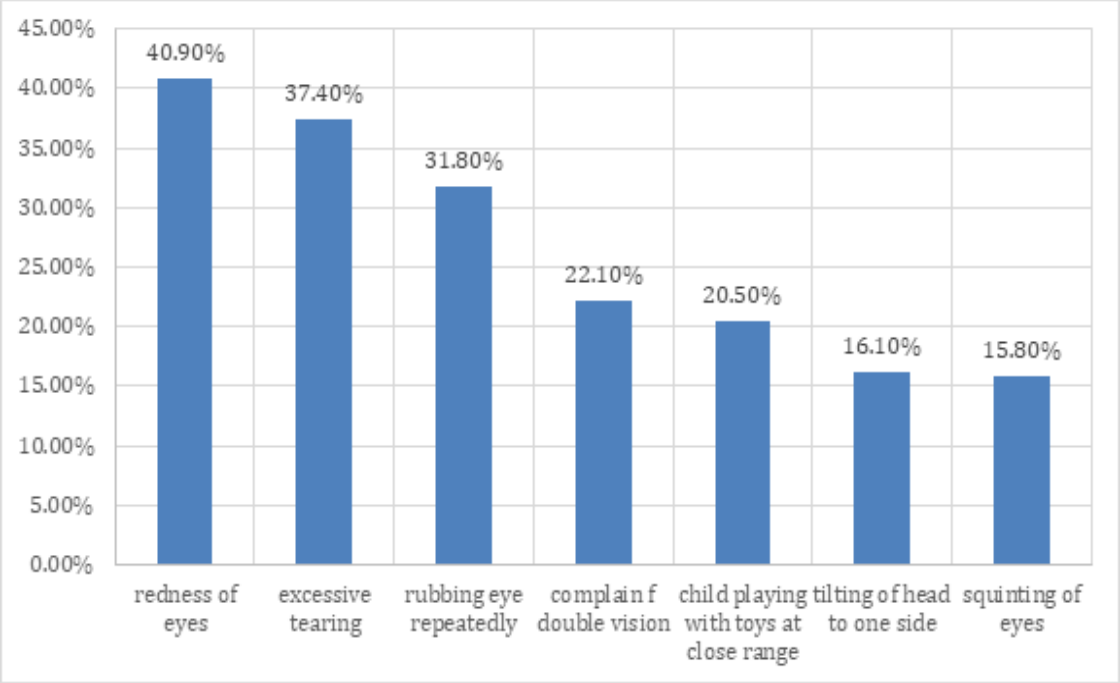
Table 1: *Determinants of knowledge of eye diseases in childhood among parents of children*

Parameters		Adequate knowledge	Inadequate knowledge	P-value*
Gender	Male	4	186	1.000
	Female	3	187	
Setting	Rural	1	143	0.261
	Urban	6	230	
Education	Illiterate	0	62	**0.018**
	Primary school	0	37	
	Middle school	0	67	
	High school	0	85	
	Higher studies	7	122	
Age	20 - 30 years	4	142	0.478
	31- 40 years	2	134	
	41- 50 years	0	68	
	>50 years	1	29	
Occupation	Unemployed	4	114	0.380
	Employed	2	177	
	Business/others	1	82	
Income	20,000 – 40,000	4	281	0.373

>40,000	3	92

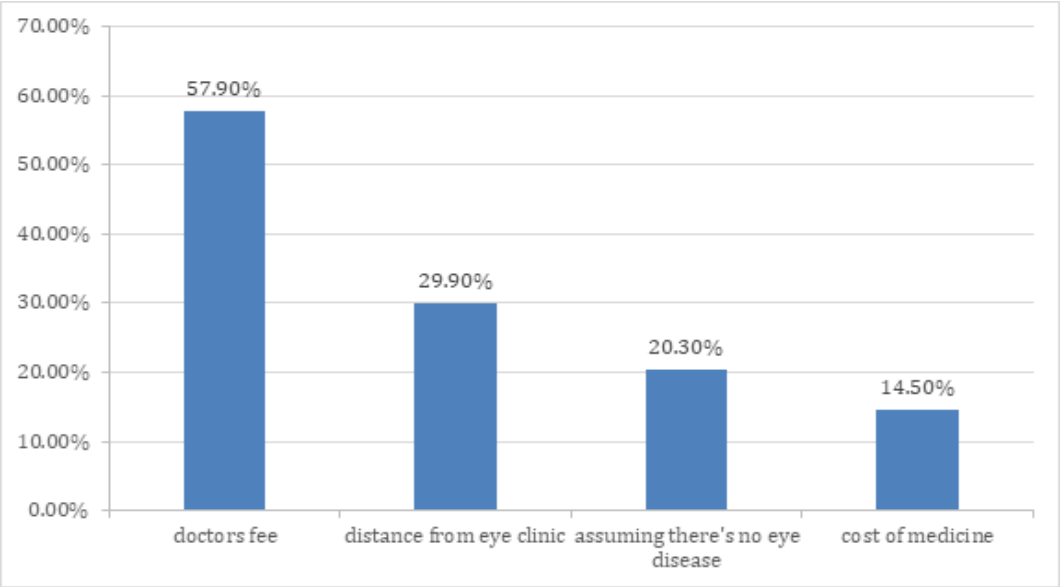
About half of the participants (46.6%) reported that they had visited ophthalmology clinics for the eye examination of their children. The frequency at which they took their child for eye checkups depends on the complaints of the child. More than half of the participants (53.4%) never took their child for checkups, and the most common reason was the absence of signs that would prompt them to take their child to an ophthalmologist. The most distressing symptom that would prompt the parents to seek medical advice was the redness of the eyes (40.9%), and excessive tearing was the second most common cause (37.4%).

Figure 1: *Observations that may prompt parents to take their child to an eye care practitioner.*



An assessment regarding how parents take their child's eye diseases seriously was made, and 76.1% responded that they would take their child to the hospital immediately. According to 57.9% of parents, the most common barrier they face in seeking eye care services is the doctor's fee.

Figure 2: *Barriers faced by parents in accessing eye care services for their children.*



Discussion

Among our large survey of those who may or may not have spoken about such topics with a pediatrician, education is one the most important determinants (p = 0.018) towards parental understanding regarding eye care and common ocular diseases This is most likely because almost all clinical entrance in Pakistan needs education as a basic requirement; moreover this important discovery goes well with previous works from Swat, Pakistan explaining how education greatly promotes ophthalmic knowledge.[9] Similarly, research conducted in South India corroborates the pivotal role of education in comprehending eye care.[6] More revelations coming from the findings of our study show a significant effect of income on eye care practices (p=0.000). In all, those in good knowledge categories of ocular care demonstrated better compliance with eye health practices (p=0.016). A similarly large number of parents in our sample (90.5%) indicated a willingness to allow eye surgery for their offspring, reflecting the view that necessary medical interventions are appropriate for addressing strabismus. However, on the contrary, negativity about complications if any persuaded few (9.5%) to consent to surgery as also echoed by a similar study from Makkah, where 68% of the parents did agree that in some conditions eye operation should be done which was found elsewhere; just 5.4% of parents with higher education have adequate eye care knowledge, while a whopping 94.6% are lacking adequacy. Another significant determinant seems to be age, which demonstrates a clear bifurcation in habits across different groups of the population for eye-care practices. Among those aged 21 to 30 years, practice was observed in only 41% of individuals, in contrast with suboptimal adherence demonstrated by 58.3%. Among parents aged 31-40 years, impressive practices were observed in

only 44% so as is poor adherence, and the rest of them had suboptimal behaviors. In parents aged 31-40 years, the practices of only (44%) were good, and the majority, about 56%, had poor adherence. However, some of the most remarkable gains were recorded in the 41–50-year age group, which showed almost twice the better practices than those who still fell short, with nearly two-thirds, 60.2% vs. 30%. And in those over 50 years of age, a solid, again even at fifty percent, a number were engaged in good practices, and many others showed subpar adherence. Results: Income is a critical factor in determining where people go for their eye care, and there are significant differences between different income brackets. About half (52.28%) of participants with income levels between 20,000 and 40,000 commended practices, and suboptimal adherence was seen in 47.8% of those earning over 40,000, commendable practices compared to only 29.47%. The majority (76.5%) responded that they would absolutely hurry to visit an eye doctor as soon as observing, e.g., Ocular abnormities in their children. However, a minority (1.3%) felt it was inappropriate to rush for medical attention, while some preferred to delay seeking care – 5.8% refused immediate help, and another 15·8% waited to depend on the child's behavioral signs. Our study highlights the crucial role of schooling in increasing parental understanding of eye care. Age and income level are also paramount factors that influence the quality of eye care practices among parents. This study highlighted the critical need for health promotional programs to improve parenting awareness, relying on different aspects of ocular care. As one traces through our findings, it is emerging that the confluence of education and income serves as a platform upon which parental attitudes toward eye care are rooted. On the one hand, the application of knowledge regarding ocular health varies across levels of education, with up to a half-fold increase in the lowest versus higher-level educated parents. Additionally, our study highlights the financial capability of income on eye care practices, whereby those with low income are more likely to engage in preventative strategies. Age also plays a very important role in the behavior of parents concerning the absence of eye care practices, with evident differences among different age groups. Although there is a trend towards higher levels of desirable practices as age increases, suboptimal adherence to eye care guidelines among parents of all ages remains noteworthy. Finally, our results point to a parental readiness for supporting possible surgical interventions required in their children, giving clear indications that they are ready and willing to fight the battle of pediatric ocular health. Nevertheless, fears about possible consequences could prevent some parents from giving their consent for surgical procedures and highlight the need to give full information with support to tackle these concerns. In summary, this study underscores the pattern of parental awareness and eye care practice. These findings provide insight into the nuanced relationship between education, income, age, and perceptions of eye care, which in turn can aid us in tailoring interventions to enhance eye care literacy as well as optimize ocular health behaviors for children. As we further consider the implications of such a

discovery, the apparent nuance in eye care practices needs to be understood, and that should address different parental-care dyads holistically. Developing educational interventions that provide information and promote positive eye health behaviors is important. This could include hands-on workshops, engagement with local communities, and the incorporation of eye-care education into school lessons. Further steps should be rolled out to enhance accessibility of eye care services, particularly in the underserved areas where obstacles to access are higher. In addition, the long-term consequences of parental attitudes and behaviors on children's eye health outcomes should be properly assessed in further research. Longitudinal studies and time trends of eye health care practices would help us to gain a better understanding of the effectiveness of interventions, as well as opportunities for further development. In conclusion, the intricate dual hierarchy of parental awareness and practices on eye care may be approached through a series of focused, targeted messages with variables such as education and access to services, further supported by ongoing research. We can make strong headway in advancing a comprehensive vision of health for every child, regardless of the community they grow up in or their life circumstances.

Conclusion

The results of our study demonstrate that people have inadequate knowledge about eye care and eye health, while practices are comparatively better. Knowledge of eye care is evenly distributed among all demographic variables except education. Parents have a big impact on their children because they are typically their first teachers and the people who teach them about health behaviors. Therefore, it is essential to consider parents' knowledge of childhood eye illnesses, their attitude toward seeking medical attention, and their compliance with the doctor's advice when creating health promotion materials. We need to raise awareness among people about eye health care to prevent the burden of eye problems in our society and their associated complications.

References

1. Loh L, Prem-Senthil M, Constable PA. A systematic review of the impact of childhood vision impairment on reading and literacy in education. J Optom. 2024 Apr-Jun;17(2):100495. doi: 10.1016/j.optom.2023.100495. Epub 2023 Nov 1. PMID: 37918059; PMCID: PMC10641537.
2. Heijthuijsen AA, Beunders VA, Jiawan D, de Mesquita-Voigt AM, Pawiroredjo J, Mourits M, Tanck M, Verhoeff J, Saeed P. Causes of severe visual impairment and blindness in children in the Republic of Suriname. Br J Ophthalmol. 2013 Jul;97(7):812-5. doi10.1136/bjophthalmol-2011-301000. Epub 2013 Apr 20. PMID: 23603759; PMCID: PMC3686325.
3. Ch MA, Chaudhary MA, Bukhari MN, Ahmed N. Prevalence of visual dysfunction and ocular motility disorders in developmentally delayed patients. Pak J Med Sci. 2023 Nov-Dec;39(6):1747-1750. doi: 10.12669/pjms.39.6.7328. PMID: 37936724; PMCID: PMC10626119.
4. Ebeigbe JA, Emedike CM. Parents' awareness and perception of children's eye diseases in Nigeria. J Optom. 2017 Apr-Jun;10(2):104-110. doi:

10.1016/j.optom.2016.06.001. Epub 2016 Jul 14. PMID: 27423689; PMCID: PMC5383457.

5. Abuallut II, Alameer KM, Abuageelah BM, Hurissi E, Alqahtani MM, Gosadi IM, Tubaigy FM, Alyami YM. Parents' Awareness, Knowledge, and Perception of Amblyopia in Children: A Study in Jazan Region, Saudi Arabia. Cureus. 2023 Nov 17;15(11):e48956. doi: 10.7759/cureus. 48956. PMID: 38106752; PMCID: PMC10725705.
6. Pawar N, Ravindran M, Fathima A, Ramakrishnan K, Chakrabarty S, Aparna K, Uduman MS. Assessment of parental awareness about pediatric visual problems by Knowledge-Attitude-Practice survey in South India. Indian Journal of Ophthalmology. 2023 May 1;71(5):2175-80.
7. Senthilkumar D, Balasubramaniam SM, Kumaran SE, Ramani KK. Parents' awareness and perception of children's eye diseases in Chennai, India. Optom Vis Sci. 2013 Dec;90(12):1462-6. doi: 10.1097/OPX.0000000000000084. PMID: 24270595.
8. Alkalash SH, Alsayed HY, Alamshani TK, Almarhabi BA, Alsayed KN, Alsayed GM, Alqarni RS, Alkinani AI, Alsharif AR, Aljohani AA, Alkudaysi FM. Knowledge, Attitude, and Practice of Parents Regarding Children's Eye Care in Al-Qunfudah Governorate, Saudi Arabia. Cureus. 2023 Oct 31;15(10):e48044. doi: 10.7759/cureus. 48044. PMID: 38034266; PMCID: PMC10688390.
9. Khan SA, Nabeel K, Muhammad I, Batool S, Javed S. Awareness of Parents Regarding Eye Diseases and Eye Care Needs among Children of Tehsil Babuzai, District Swat: Doi: 10.36351/pjo.v39i3.1509. Pak J Ophthalmol [Internet]. 2023 Jun. 30 [cited 2024 Mar. 12];39(3). (4)
10. Factors Associated with Awareness, Attitudes and Practices Regarding Common Eye Diseases in the General Population in a Rural District in Bangladesh: The Bangladesh Population-based Diabetes and Eye Study (BPDES). PLoS One,2015;10(7):e0133043.Doi: 10.1371/journal.pone.0133
11. Evaluation of awareness and attitudes towards common eye diseases among the general population of northwestern Saudi Arabia. Al-Lahim WA, Al-Ghofaili RS, Mirghani H, AlBalawi H. Egypt J Hosp Med. 2018;70:1983–1989.
12. Habiba U, Ormsby GM, Butt ZA, Afghani T, Asif M. Knowledge and practices of teachers associated with eye health of primary school children in Rawalpindi, Pakistan. Taiwan J Ophthalmol. 2017 Jan-Mar;7(1):28-33. doi:10.4103/tjo.tjo_11_17. PMID: 29018751; PMCID: PMC5525601.
13. Zulfiqar B, Chaudhary S, Anwar S. Perceptions and clinical practices of eye care practitioners in relation to childhood myopia in Pakistan. Ophthalmology Pakistan. 2021;11(3).
14. Naeem A, Siddique S, Jan U, Yousif S, Gul G, Akram R, Manzoor I, Saleem A. IMPACT OF PARENTAL PERCEPTION ON PEDIATRIC VISION CARE IN RURAL AND URBAN AREAS OF DISTRICT RAHIM YAR KHAN. Insights-Journal of Life and Social Sciences. 2025 Feb 12;3(1):72-8.
15. Khattak, M.I., Khan, N., Tahir, M.Y., Rashid, F., Iqbal, R.N. and Sarfraz, M., 2023. Knowledge, Practice and Attitude of Mothers for Ophthalmic Problems in Children in Rural Areas-A Cross-Sectional Study: Ophthalmic Problems in Children in Rural Areas. Pakistan Journal of Health Sciences, pp.115-121.