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Knowledge And Attitude on Strabismus of Parents with Strabismic Children

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ABSTRACT

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Strabismus is a common pediatric ocular condition that affects binocular vision and is associated with significant psychosocial consequences. In developing countries such as Nepal, delayed diagnosis and treatment are frequently attributed to poor parental awareness and prevalent cultural misconceptions. Assessing parental knowledge and attitudes is therefore crucial for improving early intervention and visual outcomes.

This descriptive cross-sectional study was conducted from December 2023 to December 2024 at Lumbini Eye Institute & Research Center (LEIRC), Rupandehi, Nepal, to evaluate the knowledge and attitudes of parents of children with strabismus. A total of 143 parents of children aged 1–16 years were recruited using convenience sampling. Data were collected using a pretested, structured questionnaire consisting of six knowledge-based and seven attitude-based items. Knowledge scores ≥4 were categorized as "good knowledge," and attitude scores ≥5 were considered a "positive attitude." Data were analyzed using SPSS version 22.

Findings showed that only 29.4% of respondents had good knowledge, whereas 61.5% demonstrated a positive attitude toward strabismus. Most parents recognized strabismus as a treatable condition (95.1%) and perceived it as a cosmetic concern (73.4%). Spectacles were

the most commonly identified treatment option (64.3%). No statistically significant association was found between knowledge and attitude (p = 0.486).

In conclusion, although parental knowledge regarding strabismus was limited, attitudes were generally positive. This may reflect strong cultural values related to family care and growing trust in institutional eye care services. Community-based health education and school health programs could play a crucial role in enhancing early detection and timely management of strabismus in Nepal.

Keywords: Attitude to health, child, parents, strabismus, vision disorders.

INTRODUCTION

Strabismus, or squint, is a condition where the eyes are misaligned, leading to a visible deviation. In children, strabismus ranges from 0.14% to 5.65% globally (Agaje et al., 2020; Geta & Bejiga, 2011; Goldstein et al., 1967; Multi-ethnic Pediatric Eye Disease Study Group, 2008). In Nepal, a study conducted in Kathmandu reported a prevalence of 1.6% (Nepal et al., 2003)**.**

Strabismus is often viewed as a cosmetic problem which causes mismanagement of strabismic patients, especially children. It impairs vision, quality of life and is a risk factor for amblyopia (Althiabi et al., 2023; What Is Adult Strabismus? - American Academy of Ophthalmology, n.d.). It also strains parent-child relationships and affects psychological development. Early identification and treatment are crucial and depend on parental knowledge and attitude (Akay et al., 2005; Alobaisi et al., 2022; Archer et al., 2005; Satterfield et al., 1993; Singh et al., 2017; Zhu et al., 2015)Satterfield et al. found that people who had childhood strabismus that remained uncorrected past early adolescence continued to face significant challenges later in life. Their study of 43 individuals showed ongoing problems with self-image, friendships, school, work, and even employment opportunities. These difficulties did not fade with age; instead, many became more pronounced during the teenage and adult years. The researchers also reported that participants had higher levels of emotional distress on the Hopkins Symptom Checklist compared with matched controls ($P < .01$), highlighting how deeply strabismus can affect psychological well-being ((Satterfield et al., 1993).)

Affected children may struggle academically, socially, and face mental health issues (Lin et al., 2014; Mojon-Azzi et al., 2011; Silva et al., 2022; Uretmen et al., 2003). Successful therapy requires early diagnosis and treatment, which can only be achieved if the parents

identify the symptoms of strabismus early and seek prompt medical attention from licensed ophthalmologists (Cacodcar et al., 2018).

A study conducted in Bharatpur revealed that parents from lower educational backgrounds had limited understanding of strabismus, leading to delayed medical consultation and treatment (Shrestha, 2023). Singh et al. also noted that poor parental awareness delays treatment. (Singh et al., 2017).

Despite the known impacts of strabismus, limited research has focused specifically on parental knowledge and attitudes in Nepal. Existing studies predominantly examine general ocular health or involve other stakeholders, such as teachers and healthcare workers, leaving a gap in understanding parental perspectives. To date, no published study has specifically evaluated the knowledge and attitudes of parents toward strabismus in children in Nepal. This study aims to address this gap by assessing parental knowledge and attitudes toward strabismus among parents of children attending Lumbini Eye Institute & Research Center (LEIRC), a tertiary eye hospital in southern Nepal. The findings are expected to inform awareness campaigns, guide early intervention strategies, and contribute to policy development to improve pediatric eye health in the country.

LITERATURE REVIEW

This study is guided by the Health Belief Model (HBM), a framework widely used to understand how individuals interpret health conditions and make decisions about seeking care. Rosenstock (1974) explains that people's actions are shaped by how vulnerable they believe they are, how serious they think a condition may become, and what benefits they expect from treatment compared to the barriers they face. These ideas are particularly relevant to childhood strabismus because parents decide when and where to take their child for care based largely on what they know about the condition. If parents view strabismus as harmless or purely cosmetic, they may postpone medical consultation, whereas parents who understand its visual and social implications are more likely to act sooner. Cultural beliefs, fear of surgery, limited awareness, and financial concerns can also influence their decisions (Rosenstock, 1974).

Champion and Skinner (2008) note that the HBM is especially helpful in contexts where early detection depends on knowledge and personal beliefs rather than symptoms alone. By using this model, the present study places parental knowledge and attitude at the center of treatment-seeking behavior, recognizing that improving awareness may directly contribute to earlier diagnosis and better visual outcomes for children (Champion & Skinner, 2008).

An observational, descriptive, and cross-sectional study was conducted among people of Jeddah, the western region of Saudi Arabia by using an online self-administered questionnaire (Google form) from June 7, 2018, and June 17, 2018 by Mona S Khojah and et al. Out of 589 participants, 71.5% of responders agreed that strabismus can be treated. Medical students and workers who could not answer the questionnaire were excluded. The majority of participants had good knowledge of the definition, treatment, and complications of untreated strabismus. Among the total responders, 107 (18.2%) were males 482 (81.8%) were females, 42.4% were younger than 30 years of age and 90.8% were Saudi. Only 38 (6.5%) had their child with strabismus while 37 (6.3%) had a child who was treated for strabismus and 224 (38%) of them were revealed to have a relative suffering from strabismus. Surgery, lenses, and eye patches were all chosen as feasible treatment options with 14.9%, 11.2%, and 5.4% respectively. This study found a statistically significant relation between knowledge of strabismus treatability and age, gender, and work state. Family history (16%) and eye refractive errors (12.9%) are repeatedly reported risk factors that can develop strabismus. Visual loss (4.6%), cosmetic stigma (3.9%), and poor self-image (2.4%) are the frequent complications of untreated strabismus. 471 (80%) responders believed that treatment of strabismus is essential for any age. The limitation of the study is that the survey might not cover all the different social classes of the population. Since the survey was confined to the western region of Saudi Arabia, any person living outside that region cannot fill it (Khojah et al., 2020).

A community-based cross-sectional study was conducted by Henok Biruk Alemayehu et al in Woreta town situated in Northwest Ethiopia from April–May 2020. The estimated total population was 42,595 in 9229 households. Of these, 21,297 were females and 21,298 were males. Out of the total population, 39,684 were adults, of which 19,921 were males and 19,763 were females. The final computed sample size was 424. Data was collected through a face-to-face interview with a pretested and semi-structured questionnaire. 401 individuals aged >18 participated, with a response rate of 94.5%. The study showed that 40.9% had good knowledge of strabismus. 228 (56.9%) of 401 participants had heard about strabismus, and 101 (25.2%) had obtained the knowledge from their friends. Strabismus is answered as ‘‘turning off the eye” by 215 (53.6%). 167 (41.6%) believed that strabismus could be treated. 40.9% of people have good knowledge of strabismus .56.6% of the participants gave a correct definition of strabismus. 53.1% had a favorable attitude towards strabismus. The questionnaire did not include questions about awareness of the urgency for an eye exam in cases of strabismus,

different treatment options like patching, glasses, surgery, and amblyopia which is the limitation of the study (Alemayehu et al., 2022).

A cross-sectional study was conducted by Saif Alobaisi from August 2021 to November 2021 with a sample size of 424 parents of children with strabismus. All parents between the ages of 30 and 55 who had a strabismic child and were followed up at governmental or private hospitals in Riyadh, Saudi Arabia were included in this study. The data was collected using a self-administered questionnaire which contains knowledge and beliefs-related questions about strabismus. The questions also address the barriers that parents face regarding strabismus in a child and sources of information about strabismus and management of strabismus. Strabismus causes low self-esteem, low school performance, and psychosocial difficulties (55%). 53% of parents believed that their love for the child is not affected due to strabismus and 59% believed that strabismic children should not be taken to traditional healers. Negligence of parents (76%), fear of surgery (34%), and high cost (29%) are the barriers faced during the management of strabismus. The most used and preferred source of information is doctors. Parents of non-strabismic children living outside the Kingdom of Saudi Arabia were excluded. Those questionnaires that were incompletely answered were also excluded. After family history, refractive errors are the second most frequently reported risk factor for developing strabismus 69% of the parents were aware of the relationship between strabismus and refractive error. 55% of the parents agreed that strabismus can be corrected while 8% disagreed. 14.2% answered that glasses or contact lenses could treat strabismus while 19% chose eye surgery. This study included only one region in Saudi Arabia which is the limitations of this study (Alobaisi et al., 2022).

A prospective study was conducted by Anirudh Singh in the Department of Ophthalmology, Army Hospital (R&R), New Delhi, India. A total of 120 parents aged between 6 months and 5 years were interviewed personally during their routine visit to the Strabismus clinic from January 1, 2016, to March 31, 2016. The education level of 78 parents was less than graduation (60%) and of 42 parents (40%) was graduation or higher. The major factor responsible for the knowledge and attitude of the parent regarding strabismus was their education level. Internet (81.3%) was the reliable source of information for parents with higher education levels. About 36.6% of the parents noticed strabismus in their child by themselves while 63.3% of the parents noticed strabismus in their child through information from friends or relatives. 89.3% of parents who have a lower education level and 10.7% of parents who have a higher education level think that there is no treatment for the strabismus which leads to late

consultation with the doctor and ultimately increases the chances of development of strabismic amblyopia. If someone asks something about their strabismic child, 90 (75%) parents used to feel uncomfortable. Strabismus is considered a cosmetic stigma by 110 parents (91.67%). 113 (94.17%) of the parents know well that strabismus will hinder the performance of their child and their child will lose certain opportunities or professions due to disability caused by strabismus. 74 (61.67%) parents felt that their children will have difficulty in making friends due to strabismus. 112 (93.33%) were conscious that strabismus can affect the vision of the child. The Study being confined to a single hospital can be taken as a limitation of the study (Singh et al., 2017)

METHODS AND MATERIALS

This study was based on a positivist research philosophy, which assumes that social and health-related phenomena can be measured objectively through structured tools and numerical analysis (Creswell, 2014). A quantitative, descriptive cross-sectional design was employed to collect data at a single point in time. The study population comprised parents of children aged 1 to 16 years diagnosed with strabismus who attended Lumbini Eye Institute & Research Center (LEIRC), Rupandehi, Nepal, between December 2023 and December 2024. In the absence of prior prevalence data and considering the feasibility of recruitment in a high-volume tertiary care center, a non-probability convenience sampling technique was used, and all eligible parents presenting during the study period were included, resulting in a sample size of 143 participants. Primary data were collected using a structured questionnaire developed through extensive literature review and expert consultation, with items adapted from studies in India and Saudi Arabia and culturally modified for the Nepalese context. The questionnaire included sections on socio-demographic characteristics, knowledge regarding strabismus, and attitudes toward the condition, with knowledge assessed through six items (correct response = 1, incorrect/no idea = 0) and attitude assessed through seven items (positive response = 1, others = 0), using established cut-offs to categorize good knowledge and positive attitude. Data were collected via self-administered questionnaires for literate participants and interviewer-administered questionnaires for those unable to read, with standardized procedures to minimize bias, including verbatim reading and neutral recording of responses. Content validity was confirmed by a senior paediatric ophthalmologist, and the tool was pretested on 10 parents excluded from the main study, with revisions made to enhance clarity, sequence, and cultural relevance; reliability was supported through internal consistency during pretesting. Data were

entered and analysed using IBM SPSS version 26, employing descriptive statistics and cross-tabulations to explore associations between knowledge and attitude. Ethical approval was obtained from the Institutional Review Committee of the hospital, and both verbal and written informed consent were secured, with strict adherence to confidentiality, voluntary participation, and the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) throughout the study.

RESULTS

A total of 143 parents of strabismic children participated in the study. The median age was 33 years (IQR = 11). Most respondents were males, and the majority had completed higher levels of education. Detailed sociodemographic characteristics are presented in Table 1.

Table 1

Sociodemographic Characteristics of the Respondents

Variables	Categories	Frequency (%)
Age Group (years)	20–29	40 (28)
	30–39	61 (42.7)
	40–49	21 (14.7)
	50–59	12 (8.4)
	Above 60	9 (6.3)
Gender	Male	81 (56.6)
	Female	62 (43.4)
Education Level	Lower level education	31 (21.7)
	Middle level education	48 (33.6)
	High level education	64 (44.8)
Monthly Income (NPR)	Up to 15,000	45 (31.5)
	15,001 – 30,000	55 (38.5)
	30,001 – 50,000	34 (23.8)
	50,001 – 80,000	4 (2.8)
	Above 80,000	5 (3.5)

The study found that 29.4% of the participants had good knowledge about strabismus, while the remaining 101 (70.6%) demonstrated poor knowledge (Figure 1). The most correctly identified items were related to treatment options, whereas misconceptions persisted regarding causes and complications. Full distributions are presented in Table 2**.**

Figure 1

Distribution of parental knowledge on strabismus (Good vs Poor).

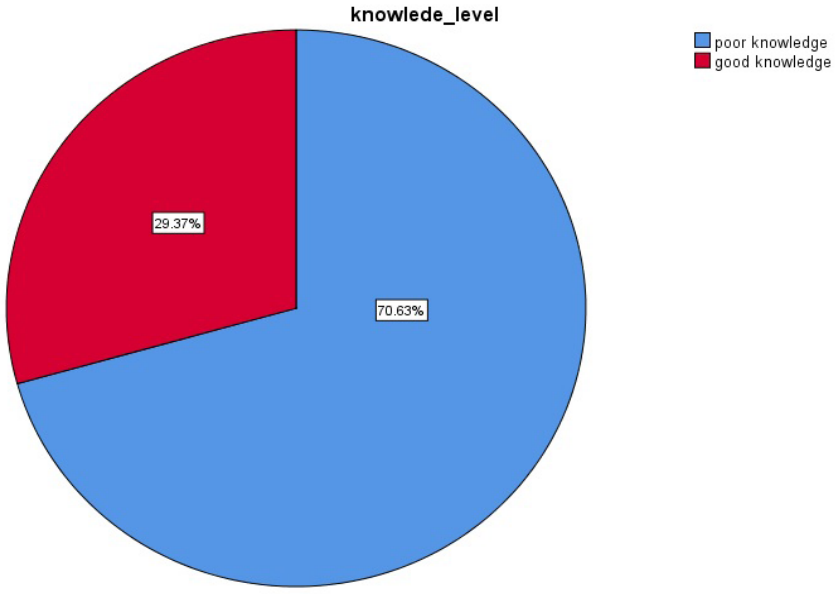


Table 2

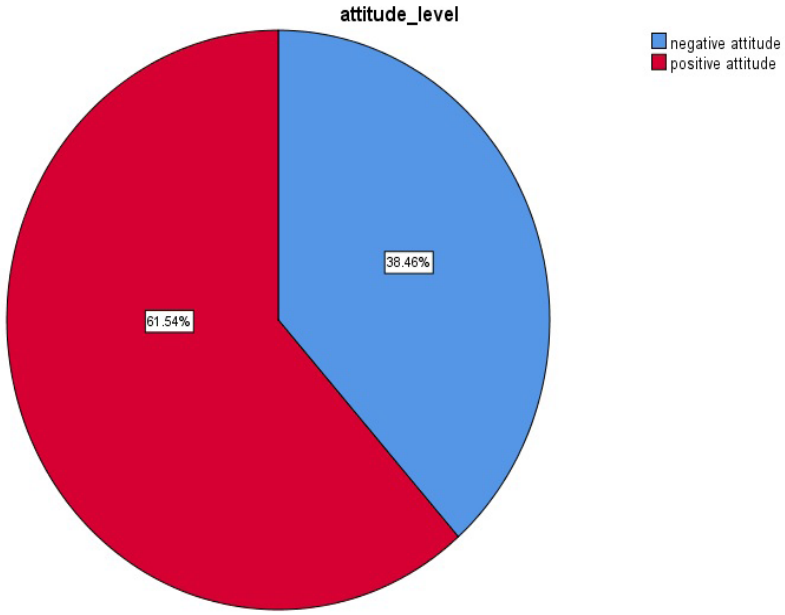
Knowledge Regarding Strabismus Among Parents

Variables	Categories	Frequency (%)
First noticed strabismus	Parents	105 (73.4)
	Other family members	17 (11.9)
	Relatives	10 (7)
	Friends	11 (7.7)
Does strabismus affect child's vision?	Yes	88 (61.5)
	No	36 (25.2)
	No idea	19 (13.3)
Hinders child's performance	Yes	52 (36.4)
	No	73 (51)
	No idea	18 (12.6)
Psychological impact on child	Yes	18 (12.6)
	No	87 (60.8)
	No idea	38 (26.6)
Is it a cosmetic stigma?	Yes	105 (73.4)
	No	30 (21)
	No idea	8 (5.6)

Can it be treated?	Yes	136 (95.1)
	No	1 (0.7)
	No idea	6 (4.2)
Treatment options known	Spectacles	92 (64.3)
	Eyedrops	33 (23.1)
	Surgery	17 (11.9)
	Self-resolve	1 (0.7)
Perceived consequences	Vision reduction	87 (60.8)
	Cosmetic deformity	48 (33.6)
	Psychological trauma	3 (2.1)
	Problem with marriage	5 (3.5)
Overall knowledge level	Good knowledge	42 (29.4)
	Poor knowledge	101 (70.6)

Figure 2

Distribution of parental attitude towards strabismus (Positive vs Negative).



Interestingly, 88 (61.5%) demonstrated a positive attitude toward strabismus, while 55 (38.5%) had a negative attitude. (Figure 2) Positive responses were most consistent regarding the need for early treatment. Detailed responses are shown in Table 3.

Table 3

Attitude Regarding Strabismus Among Parents

Variables	Categories	Frequency (%)
Bothered by strabismus	Yes	78 (54.5)
	No	65 (45.5)
Love affected by strabismus	Yes	5 (3.5)
	No	138 (96.5)
Preferred treatment location	Eye doctor	128 (89.5)
	Traditional healer	15 (10.5)
Marriage acceptance	Yes	31 (21.7)
	No	79 (55.2)
	Neutral	33 (23.1)
Social participation of strabismic child	Yes	124 (86.7)
	No	11 (7.7)
	Neutral	8 (5.6)
Strabismus as sign of bad luck	Yes	22 (15.4)
	No	103 (72)
	No idea	18 (12.6)
Surgery cost as barrier	Yes	41 (28.7)
	No	82 (57.3)
	No idea	20 (14)
Overall attitude level	Positive attitude	88 (61.5)
	Negative attitude	55 (38.5)

A cross-tabulation was conducted to assess the association between knowledge and attitude levels regarding strabismus. Among parents with good knowledge, 24 (57.1%) had a positive attitude and 18 (42.9%) had a negative attitude. Among those with poor knowledge, 64 (63.4%) demonstrated a positive attitude, while 37 (36.6%) had a negative attitude. The Pearson Chi-square test (χ^2) yielded a value of 0.485 (df = 1, p = 0.486), indicating no statistically significant association between knowledge and attitude levels (Table 4).

Table 4

Association Between Knowledge and Attitude Toward Strabismus (p = 0.486)

Knowledge Level	Attitude Level	Count (n)	Expected Count
Poor Knowledge	Negative Attitude	37 (36.66)	38.8
	Positive Attitude	64 (63.4)	62.2
Good Knowledge	Negative Attitude	18 (42.9)	16.2
	Positive Attitude	24 (57.1)	25.8
Total		**143**	

* p-value calculated using Pearson Chi-square test; significance set at $p < 0.05$.

DISCUSSION

This study set out to examine how much parents of children with strabismus in Nepal know about the condition and how they perceive it. The results revealed that only 29.4% of the parents demonstrated good knowledge, while a significant majority (70.6%) showed poor understanding. Interestingly, however, over half (61.5%) displayed a positive attitude toward the condition.

Our findings regarding limited knowledge mirror those reported in Central Ethiopia, where many adults lacked adequate awareness about the causes and treatment options for strabismus.(Geta & Bejiga, 2011) This similarity might be due to limited access to pediatric ophthalmology services or insufficient public eye health education in rural regions. In contrast, Shrestha observed much better awareness among school staff in Nepal.(Shrestha, 2023) This difference is likely due to the participants' professional backgrounds, which provide them greater exposure to ocular health education.

Other studies reported significantly higher knowledge levels i.e. Alemayehu et al. (54.9%) and Alzuhairy et al.(50.6%).(Alemayehu et al., 2022; Alzuhairy et al., 2019)parent's cooperation is essential. It depends upon their level of awareness. The objective was to describe the determinants and the level of knowledge and attitude towards strabismus among parents of children with strabismus in Saudi Arabia.\nMethods: This cross-sectional study was conducted in 2018 at a hospital in Qaseem, Saudi Arabia. Consented parents of children with strabismus presenting to Qaseem University eye clinic were interviewed. Data were anonymously collected on participant demographics and the child's strabismus. The survey interview consisted of 8 questions related to signs, symptoms, and management of strabismus. Three questions related to the attitude towards strabismus among parents/caregivers. Two separate questions queried the source of knowledge and possible barriers, respectively.\nResults: Each parent of 81 children was interviewed. An excellent level of knowledge of strabismus was noted for 41 participants (50.6% at 95%CI 39.7-61.5 Similarly, Khojah et al. (2020) found that people had good understanding about description, management and complications of strabismus.This study aimed to find out the level of knowledge and treatability of strabismus in the western province of Saudi Arabia. Methods An observational cross-sectional study was conducted in 2018 among people who live in the western region of Saudi Arabia and were age 16 and above by using an online self-administered questionnaire. Results Out of 589 participants, 52.8% reported the correct definition of strabismus. The majority of responders agreed that

strabismus is treatable (71.5% Such contrasts could be due to broader health literacy or more robust outreach programs in those regions.

Regarding awareness of visual impact, 61.5% acknowledged that strabismus could affect vision., consistent with Cacodcar et al(65%).(Cacodcar et al., 2018) However, Singh et al. found a much higher awareness rate (93.33%), possibly because their study was conducted in a more urban and educated setting(Singh et al., 2017). Conversely, Alobaisi et al. found only 51% of parents strongly believed that strabismus causes functional visual disability in their children, perhaps reflecting different public health priorities or limited vision health awareness.(Alobaisi et al., 2022)

The belief that strabismus negatively affects a child's appearance was shared by 73.4% of our respondents. This proportion was lower than Singh et al.'s findings (91.67%), suggesting differences in cultural emphasis on aesthetics (Singh et al., 2017). Alobaisi's study showed only 57% agreement, further highlights how cultural norms influence the perceived stigma of visible conditions.(Alobaisi et al., 2022)

Only 12.6% believed that strabismus has psychological impact on children which is much lower than Alobaisi et. al (55%) and Singh et. al (36.67%).(Alobaisi et al., 2022; Singh et al., 2017). This disparity could be attributed to Nepal's limited discourse on child mental health, or to parents' predisposition to downplay emotional issues.

Nearly all parents in our study (95.1%) believed that strabismus is treatable. This is considerably higher than the 77.67% reported by Singh et al. and far exceeds the figures from Geta and Bejiga (32.1%) and Alemayehu et al. (41.6%).(Alemayehu et al., 2022; Geta & Bejiga, 2011; Singh et al., 2017) These differences may be due to growing community health efforts in Nepal.

Most parents (64.3%) identified spectacles as the primary treatment option, followed by eye drops (23.1%), surgery (11.9%), and self-resolution (0.7%). In contrast, Khojah et al. reported higher awareness of surgery (14.9%) and lenses (11.2%).(Khojah et al., 2020) Similarly, Bukhari et al. found that parents mentioned glasses (63.6%), surgery (60.6%), and muscle exercises (47.8%).(Bukhari et al., 2018) These variations may reflect differences in health education or access to ophthalmic care.

This present study showed that 61.5% of parents held a positive attitude towards strabismus, which aligns well with findings from North West Ethiopia (53.9%).(Alemayehu et al., 2022)Studies by Alzuhairy et al (70.4%) and Tegegn et al. (71.8%) also reported encouraging attitudes.(Alzuhairy et al., 2019; Tegegn et al., 2021)In contrast, Geta and Bejiga

found much poorer attitudes in Cheha District, likely linked to persistent social stigma and a lack of accessible counseling.(Geta & Bejiga, 2011)

Interestingly, even though a greater number of parents with poor knowledge showed a positive attitude, the statistical analysis did not find any meaningful link between knowledge and attitude ($\chi^2 = 0.485$, $p = 0.486$). This indicates that simply knowing more about strabismus doesn't necessarily shape how parents feel about it. Factors like personal experiences, cultural beliefs, or emotional factors may play a more important role in shaping attitudes.

In terms of social acceptance, only 21.7% of respondents said they would marry or allow a relative to marry someone with strabismus. This is considerably lower than Alanazi et al. (45.6%), Geta and Bejiga (48.6%), and Alemayehu (60.8%).(Alanazi et al., 2023; Alemayehu et al., 2022; Geta & Bejiga, 2011)These findings suggest that societal stigma related to marriage remains a significant issue in Nepal.

About 54.5% of parents reported being emotionally distressed by their child's condition which is lower than findings of Singh et al(96.67%) and Kothari et al (70%).(Kothari et al., 2009; Singh et al., 2017) The relatively lower distress levels in our study may reflect acceptance or possibly underreporting due to cultural reluctance to discuss emotional challenges.

A majority of parents (89.5%) said they would seek help from an eye doctor, whereas a small portion (10.5%) would consider traditional healers. In contrast, Geta and Bejiga's study reported that only 32.1% sought hospital care.(Geta & Bejiga, 2011) Alanazi et al. also found a high level of medical-seeking behavior (72.6%), indicating that awareness and trust in ophthalmology treatment are improving.(Alanazi et al., 2023)

Lastly, financial constraints emerged as a significant barrier in this study, reported by 28.7% of respondents. Conversely, Alzuhairy et al. found higher costs (43.2%) and widespread misconceptions as most significant obstacles (53.1%).(Alzuhairy et al., 2019) Caculo and Gupta emphasized that lack of understanding about when to seek treatment was the dominant barrier.(Caculo & Gupta, 2021) Together, these findings indicate that while cost is a clear obstacle, it often interacts with misinformation and access issues.

Importantly, these findings are consistent with the boarder goals described in Nepal's National Eye Health Policy 2017, which highlights the need to improve community-level awareness, early diagnosis, and referral systems for childhood eye disorders. In order to help closing existing gaps, education on strabismus could be included into school health programs and basic care. Additionally, the WHO's Vision 2020 initiative and its successor framework on Integrated People-Centered Eye Care (IPEC) highlight the value of targeted outreach and

public participation in Nepal by identifying strabismus as a condition that highly benefits from early care.

In summary, while knowledge gaps remain prominent, parental attitudes appear largely supportive and action-oriented. This creates a valuable opportunity to improve eye health outcomes through targeted education, better resource allocation, and sustained community engagement.

This study had several limitations. Firstly, data were collected from a single tertiary eye hospital, which may limit the generalizability of the findings to broader populations. Secondly, the use of a structured questionnaire could have introduced response bias, as participants might have provided socially desirable answers rather than their genuine views. Thirdly, the cross-sectional design restricts the ability to draw causal inferences between knowledge, attitude, and demographic variables. Moreover, the study included only parents of strabismic children, excluding the perspectives of other caregivers or community members. Another limitation of our study is that the angle of deviation of strabismus was not measured. The magnitude of deviation may influence the psychosocial impact of strabismus and could affect parental attitudes toward seeking treatment. Moreover, socioeconomic status was not assessed using a standardized scale such as the Kuppuswamy scale. Also, no validated questionnaire specific to parental knowledge and attitude on strabismus was available, we adapted our own tool. Finally, the absence of a qualitative component may have limited the depth of understanding regarding cultural perceptions and emotional responses. Future research involving mixed methods and diverse geographic settings is recommended to validate and enrich these findings.

CONCLUSION

This study highlights a striking contrast between what parents know about strabismus and how they feel about it. Although most parents lacked detailed knowledge about the condition, many still showed a positive and supportive attitude toward their children. This suggests that cultural values, emotional bonding, and growing trust in medical care may help mitigate the impact. of limited awareness. At the same time, the findings point to an urgent need for more effective communication and community-level education around eye health. By integrating strabismus awareness into schools, primary care, and public health outreach, we can help parents recognize the condition earlier and seek timely treatment—ultimately improving both visual outcomes and social acceptance for children with strabismus. The study supports

integrating pediatric eye health modules into national school health programs and promoting strabismus awareness through primary care outreach.

RECOMMENDATION

Based on the findings of this study, it is recommended that community-based awareness initiatives be strengthened to enhance parental understanding of strabismus, its early manifestations, and available treatment options. Eye health education should be systematically integrated into national school health programs to facilitate early recognition among students, teachers, and caregivers. Primary healthcare professionals should be adequately trained to perform basic ocular screening and provide timely referral for suspected cases. Furthermore, culturally sensitive educational materials developed in local languages are essential to address prevalent myths and misconceptions. The implementation of regular school- and community-based vision screening programs, along with structured counseling services at eye care facilities, is strongly recommended to support parents and improve adherence to treatment, thereby enhancing visual outcomes and social acceptance among children with strabismus.

FINANCIAL DISCLOSURE

None

CONFLICT OF INTERESTS

The authors declare no conflicts of interest.

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