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ORIGINAL RESEARCH

Experiences and Support Needs of Parents of Children with Strabismus: A Family Systems Theory Perspective

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Objective: This study aimed to explore the experiences and needs of parents of children with strabismus through the lens of family systems theory, to guide the development of targeted interventions.

Methods: A total of 12 parents of children, aged 4–11 years, with strabismus were selected through purposive sampling between January and February 2025. There were 2 cases with esotropia and 10 with exotropia. Data were collected through semi-structured interviews, utilizing a descriptive phenomenological approach. The Colaizzi phenomenological seven-step analysis method was employed to systematically summarize, analyze, and refine themes from the data.

Results: Four main themes and twelve sub-themes were identified in the analysis. The primary themes included: (1) emotional distress, which included anxiety, worry, confusion, guilt, embarrassment, and helplessness; (2) adjustment and coping strategies encompassing division of labor, cooperation, and active responses; (3) multiple challenges encountered, such as parent-child conflict, alienation, familial friction, divergence among family members, inconsistent information, and financial burden; and (4) multifaceted needs, including the need for disease-related knowledge, access to medical resources, and emotional support.

Conclusion: Parents of children with strabismus experience significant emotional distress and encounter various challenges, while also developing resilience and adopting coping strategies. Despite these efforts, a lack of adequate knowledge, medical resources, and emotional support persists. It is essential for healthcare professionals to address the emotional well-being of these parents, recognize their positive experiences, and promote proactive coping strategies. Additionally, collaboration among healthcare providers, families and community resources is crucial to delivering comprehensive support and enhancing the overall quality of care.

Keywords: caregiving experience, emotional distress, family systems theory, qualitative research, strabismus

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Introduction

Strabismus, a common pediatric ophthalmic condition, is characterized by ocular misalignment due to irregular positioning or movement, leading to abnormal visual function and appearance, with a reported prevalence ranging from approximately 0.53% to 5%.[1,2] In addition to its impact on physical appearance, strabismus can lead to complications such as diplopia, visual confusion, and amblyopia, potentially resulting in long-term impairment if left untreated.[3] Furthermore, children with strabismus often face emotional challenges, including low self-esteem and social anxiety, which adversely affects their social interactions and academic performance.[4] For parents, as primary caregivers, the condition imposes substantial stress. This stress intensifies their psychological burden, adversely impacts the family environment, and diminishes the quality of care provided to the child.[5]

Family systems theory (FST), developed by American professor Murray Bowen in 1963, provides a framework for understanding emotional and communication behaviors within the dynamics of family interactions and the family's relationship with its external environment.[6] FST emphasizes that families operate as interconnected systems, where members influence one another and collectively manage stress and change.[7,8] Previous studies have largely focused on

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the impact of strabismus on children, frequently overlooking the experiences and needs of parents involved in caregiving. Gaining a comprehensive understanding of the caregiving experiences and needs of parents of children with strabismus is crucial for improving the quality of care. Therefore, this study adopts the FST framework and employs descriptive qualitative research methods to explore the specific challenges and needs encountered by parents during the caregiving process. The findings aim to inform the development of targeted interventions to strengthen the overall family support system.

Participants and Methods

Participant Selection

A purposive sampling method was utilized to select parents of children diagnosed with strabismus who sought medical care at the ophthalmology department of a tertiary hospital in Beijing between January and February 2025. The inclusion criteria were: 1) parents aged 18 years or older; 2) parents of children meeting the diagnostic criteria for strabismus and underwent surgical treatment;[9] 3) active involvement in medical decision-making for the child; 4) primary responsibility for caregiving tasks; and 5) the ability to communicate effectively.

The exclusion criteria were: 1) children with coexisting severe systemic diseases; 2) parents who had experienced major traumatic events—such as severe accidents, the sudden loss of a loved one, or natural disasters—within the past month; and 3) parents with prior exposure to health education or training related to similar conditions.

To ensure the comprehensiveness of interview data, the sample size was determined based on the principal of data saturation where interviews no longer revealed new themes or insights.[10] After achieving data saturation, two additional participants were interviewed to confirm the stability of the findings. A total of 12 respondents were ultimately included in the study. Ethical approval for the study was obtained from the ethics committee of the hospital (No. KY2024-422-02), and all participants provided voluntary informed consent by signing the consent form.

Study Methods

Development of the Interview Outline

The interview outline was developed based on the study objectives and guided by the FST framework. This process involved an extensive literature review and group discussions. To ensure relevance and clarity of questions, a preliminary version of the interview outline was tested in pre-interviews conducted with two selected respondents. Feedback from these pre-interviews was incorporated to refine the questions, resulting in the final interview outline. The finalized interview outline included the following key questions: 1) How do you perceive strabismus in your child? What caregiving related information do you currently possess? 2) What caregiving strategies have you implemented for your child with strabismus? What challenges have you encountered and how were these challenges addressed? 3) Do you feel that adequate emotional support was provided within the family? What additional support, if any, would have been beneficial? 4) In what ways has your family influenced your perceptions and caregiving approaches for your child with strabismus? 5) What roles have been assumed by different family members in the caregiving process? 6) What unmet needs or challenges have you faced while caring for your child and what forms of assistance or support would have been helpful?

Data Collection and Quality Control Methods

Data collection was carried out through face-to-face semi-structured interviews conducted in the ophthalmology ward demonstration classroom. To ensure methodological rigor and data reliability, the following procedures were implemented:

1. Pre-interview preparation: Prior to data collection, all members of the interview team underwent systematic training in qualitative research methodologies and interview techniques. This training ensured a thorough understanding of the interview outline and adherence to standardized procedures. Participants were contacted in advance to provide detailed information regarding the objectives of the study, methodology, and interview content, and to arrange a mutually convenient interview schedule.

2. Interview process: Formal interviews were conducted by two researchers working concurrently, with one serving as the primary interviewer and the other responsible for taking supplementary notes. Each interview was audio-recorded and additional observations were documented including the tone of respondents, intonation, facial expressions, and body language. The interviewer adopted a flexible approach to the sequence of questions and dialogue style, adapting to the participants' responses while adhering to objectivity and neutrality to minimize bias. Leading questions were avoided and any ambiguous responses provided by the participants were clarified in a timely manner. The duration of each interview ranged from 20 to 30 minutes.
3. Post-interview data analysis: Following the interviews, the two researchers independently analyzed the collected data. Any discrepancies in interpretation were resolved through group discussion among the research team, ensuring accuracy and consistency of the final results.

Data Analysis Method

Interview recordings were transcribed verbatim within 24 hours of data collection to ensure accuracy and completeness. Data were analyzed using Colaizzi's method, which provides a structured approach to qualitative analysis through the following sequential steps: 1) All interview transcripts were thoroughly documented and meticulously reviewed to achieve an in-depth understanding of the content; 2) Key statements relevant to the research objectives were extracted from the transcripts to capture meaningful insights; 3) The underlying meanings within the extracted statements were summarized and refined to facilitate interpretation; 4) Common concepts and characteristics were identified to formulate themes, thematic clusters, and categories, providing a structured framework for data interpretation; 5) The identified themes were systematically linked to the research context to construct comprehensive narratives that reflect the experiences of the participants; 6) The core essence of phenomenon under investigation was articulated ensuring that the findings accurately represented the perspectives of the participant; and 7) Findings were reconfirmed with participants to enhance credibility. Any necessary modifications were made based on their feedback. In cases where discrepancies arose during the analytical process, consensus was achieved through discussions within the research team.

Results

Baseline Characteristics

Baseline demographic and clinical characteristics of the parents and children are summarized in Table 1. To protect participant confidentiality, all identities were anonymized using a coding system. The parent participants (n = 12) had a mean age of 35.4 years, and 83% were mothers. The study included 12 children with strabismus (7 boys and 5 girls) aged 4 to 11 years (mean age 7.9 ± 2.2 years). Among them, 2 had esotropia and 10 had exotropia.

Analysis resulted in four categories: (1) Emotional Distress; (2) Adjustment and Coping Strategies; (3) Facing Multiple Challenges; (4) Desire for Multifaceted Support Needs.

Emotional Distress

Anxiety and Concern

Strabismus, a condition that affects visual function and ocular alignment often leads to significant anxiety and concern among parents primarily due to uncertainties surrounding treatment outcomes and future development of their child. Parents frequently express concerns about potential social challenges their child may face, including potential peer ridicule and discrimination in various aspects of life such as education, employment, and relationships. Some parents expressed concerns that as their child grows older, social acceptance could become increasingly difficult, potentially leading to adverse emotional and psychological effects. Concerns regarding the effectiveness and potential complications of treatment further contribute to parental anxiety. Parents often express fears related to the possibility of overcorrection or undercorrection, which can lead to persistent distress and uncertainty regarding the child's visual prognosis. The ongoing concern over whether their child will achieve normal visual function and participate in everyday activities without limitations remains a source of significant emotional burden for many caregivers.

Table 1 Demographic and Clinical Characteristics of Children with Strabismus and Their Families (n=12)

No.	Parents								Children					
	Gender	Age (Years)	Place of Residence	Relationship with the Child	Education Level	Occupation	Medical Payment Method	Monthly Household Income (RMB 10,000)	Gender	Age (Years)	Only Child	Strabismus Type	Disease Duration (Years)	Amblyopia
P1	Female	36	City	Mother-son	Junior high school	None	Basic medical insurance for urban residents	0.6–0.8	Male	8	No	Exotropia	5	No
P2	Female	33	Rural	Mother-daughter	Junior high school	Self-employed	Basic medical insurance for urban residents	0.7–0.9	Female	8	No	Exotropia	5	No
P3	Female	32	City	Mother-son	Undergraduate	Teacher	Basic medical insurance for urban residents	1.2–1.5	Male	4	Yes	Esotropia	3	Yes
P4	Female	36	City	Mother-daughter	Undergraduate	Self-employed	Self-pay	0.9–1.0	Female	9	Yes	Exotropia	1.5	No
P5	Female	36	City	Mother-son	Junior high school	Teacher	Basic medical insurance for urban residents	0.7–1.2	Male	6	No	Exotropia	2	No
P6	Female	37	City	Mother-son	Undergraduate	Employee	Basic medical insurance for urban residents	0.6–1.0	Male	6	Yes	Exotropia	3	No
P7	Female	34	City	Mother-daughter	Undergraduate	Employee	Basic medical insurance for urban residents	0.7–1.1	Female	10	Yes	Exotropia	2	Yes
P8	Female	37	City	Mother-daughter	Master	Teacher	Basic medical insurance for urban residents	0.8–1.5	Female	10	Yes	Exotropia	3	No

P9	Male	35	City	Father-son	Master	Employee	Basic medical insurance for urban residents	1.0–1.5	Male	10	No	Exotropia	2	No
P10	Female	32	Rural	Mother-daughter	Junior high school	Farmer	Basic medical insurance for urban residents	0.5–0.7	Female	5	No	Exotropia	2	No
P11	Female	37	City	Mother-son	Undergraduate	Self-employed	Self-pay	0.7–1.0	Male	11	Yes	Esotropia	8	Yes
P12	Male	40	Rural	Father-son	High school	Farmer	Self-pay	0.3–0.5	Male	8	No	Exotropia	5	No

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Confusion and Guilt

A limited understanding of the etiology and treatment of strabismus is commonly observed among parents, often resulting in feelings of confusion and self-blame for their perceived inability to prevent or detect the condition at an earlier stage. Many parents experience uncertainty regarding the underlying causes of strabismus, questioning whether it is congenital or influenced by developmental and behavioral factors. Some parents report undergoing extensive medical evaluations, including imaging and diagnostic tests, yet remain uncertain about the cause and appropriate treatment of their child's condition. Additionally, feelings of guilt are prevalent, with parents attributing the condition to their perceived lack of attentiveness during early childhood. They often express regret for not recognizing early signs or ocular habits that may have indicated the presence of strabismus, leading to concerns about their competence as caregivers.

Embarrassment and Helplessness

Many parents of children with strabismus experience feelings of embarrassment often triggered by the reactions and misconceptions of others. They report encountering situations where people in their hometowns have pointed and laughed at their children, leading to significant discomfort and prompting some to avoid discussing the condition or returning to familiar environments. Additionally, parents frequently express a sense of helplessness, as they perceive a lack of understanding and support from those around them. They note that individuals in their social circles often regard strabismus as a minor issue that will resolve over time, leaving parents feeling isolated and without adequate support.

Adjustment and Coping Strategies

Division of Labor and Cooperation

Parents reported managing daily caregiving challenges through a structured division of responsibilities and collaborative efforts within the family. This cooperation not only alleviates the burden on individual family members but also fosters mutual understanding and support. They described how specific caregiving tasks were allocated, with one parent taking responsibility for follow-up examinations and eye training, while the other assisted with cooking meals and homework. Grandparents also contributed by providing emotional support and small gifts to the child, which parents noted helped ease their burden and improved coordination within the family unit.

Active Response

Many parents sought to enhance their sense of control over the condition of their child by actively participating in the treatment and rehabilitation process. Parents have reported taking deliberate steps to engage with healthcare professionals and support rehabilitation efforts of their child at home. One parent described a commitment to active involvement, stating that from the beginning, they ensured thorough consultations with medical professionals and provided consistent support during rehabilitation exercises at home, which contributed to a greater sense of control and reduced anxiety. Another parent expressed a similar sentiment, emphasizing the importance of their role in the recovery process and highlighting the sense of accomplishment derived from witnessing their child's dedication to training.

Facing Multiple Challenges

Parent-Child Conflict and Alienation

The young age of children with strabismus, coupled with their frequent lack of cooperation during treatment, often contributes to increased tension and emotional distance in the parent-child relationship. Parents tend to place significant emphasis on treatment procedures, which can unintentionally strain their interactions with their children. Some parents reported that their efforts to correct the posture of their child or encourage adherence to treatment routines were met with resistance and frustration. One parent noted that repeated attempts to guide the posture of their child led to irritability and avoidance, stating that their child had become more irritable and deliberately avoided communication. Another parent reported a noticeable shift in the behavior of their child, expressing concern that the child, who previously displayed a strong attachment, had started to withdraw emotionally, no longer seeking affection or requested toys.

Friction and Divergence Among Family Members

Differences in perceptions regarding treatment expectations and the condition of the child often leads to disagreements among family members. Some parents reported that older family members, such as grandparents, perceive the condition as a temporary issue that will resolve naturally with time, leading to a more passive approach to treatment. One parent described a divergence in views, explaining that while they prioritized early intervention for better outcomes, their parents believed that the young age of the child warranted a more lenient approach, assuming that natural improvement would occur over time. Another parent highlighted the emotional challenges arising from such differences, noting that remarks attributing the condition of the child to hereditary factors created additional stress and uncertainty, while their primary concern remained focused on gradual improvement through consistent treatment.

Inconsistent Information

Parents of children with strabismus frequently face challenges in navigating the diverse sources of information available to them, often encountering inconsistencies in quality and reliability. Many parents report feeling overwhelmed by the abundance of information following the diagnosis of their child, struggling to determine its accuracy and relevance. One parent described the difficulty in discerning credible information, stating that the sheer volume of content encountered, particularly when considering surgical options, contributed to confusion and uncertainty regarding the best course of action. Another parent expressed a strong reliance on medical professionals but acknowledged the significant discrepancies between online information and the guidance provided by healthcare providers, further complicating the decision-making process.

Heavy Economic Burden

The financial burden associated with strabismus treatment, including both direct medical expenses and indirect hidden costs, places significant economic pressure on many families. The high cost of corrective eyewear, which requires regular adjustments, poses a substantial financial challenge. One parent reported that the cost of their child's corrective glasses amounted to over 4,000 Chinese Yuan, nearly half of the father's monthly salary, highlighting the considerable expense involved in ongoing treatment. Additionally, the need for frequent hospital visits often compels parents to reduce their working hours or leave their jobs entirely, further exacerbating financial difficulties. A parent described the challenges faced as an outsider traveling to Beijing for medical appointments, noting the substantial costs of transportation and accommodation. The prolonged waiting times for follow-up visits have made it increasingly difficult to maintain employment, resulting in a heavy reliance on a single source of income within the household.

Desire for Multifaceted Support Needs

Need for Comprehensive Understanding of the Condition

A comprehensive understanding of strabismus is crucial for parents to effectively manage the condition of their child and take proactive steps. Interviews with parents revealed a significant gap in knowledge regarding early detection, available treatment options, and the expected treatment outcomes. This highlights the urgent need for professional medical guidance. Many parents expressed concerns about how treatment might affect the daily life of their child and the possibility of future recurrence. One parent explained that their child often tilted her head to view objects, initially believing it to be a habit, without recognizing the underlying issue. It was only after a medical examination that the child was diagnosed with strabismus. This prompted the parent to realize they had overlooked the issue and were uncertain about what to monitor in everyday life.

Another parent expressed uncertainty about the causes and available treatment options, questioning whether the use of glasses or exercises would be sufficient, or whether both treatments were necessary. They also inquired about the necessity of surgery, its potential effectiveness, and the likelihood of recurrence after the procedure. Parents also reported difficulty in understanding medical terminology, with one parent raising concerns about the ability of their child to function normally in school due to the squint. They noted that the use of overly technical language by doctors made it difficult to fully comprehend the information, leading to hesitation in asking questions. This parent expressed a desire for a more detailed and understandable explanation from healthcare providers.

Need for Medical Resources

In the hospital setting, parents of children with strabismus often aim to minimize healthcare expenditures while ensuring that their children receive optimal treatment and multidisciplinary collaborative support. They noted that while doctors fulfill their responsibilities, communication regarding treatment plans and procedures is sometimes insufficiently detailed. Since many parents lack medical knowledge, there is a strong desire for hospitals to establish a more transparent treatment process and encourage greater collaboration among medical teams to help parents make informed decisions. One parent emphasized that having a team of ophthalmologists, psychologists, and rehabilitation specialists significantly contributed to their child's recovery. While some parents expressed the ability to pay for treatment, there was a clear desire to reduce costs, particularly for examination fees and subsequent treatments. One parent suggested that improved reimbursement rates would alleviate some of the financial burden.

Beyond the hospital, parents expressed concerns about early screening for strabismus and continuous care services. They suggested that local communities could provide regular vision tests, which would make follow-up visits more convenient. Additionally, parents expressed the need for ongoing support once they return home. They highlighted that although doctors provide numerous precautions during follow-up visits, they often worry about being unable to properly implement these recommendations. Parents suggested that it would be helpful if healthcare professionals, such as doctors or nurses, could offer guidance via phone or messaging platforms like WeChat to support them in following through with care instructions.

Need for Emotional Support

Emotional support is vital for parents of children with strabismus. Many parents express a desire for both emotional and practical support from their families. One parent suggested that if extended family members, such as grandparents, could educate themselves on child care and participate in caregiving, it would significantly ease the burden. However, some parents report experiencing criticism from family members, particularly from in-laws, who attribute the condition of the child to a shortcoming in parental care. One parent shared that her in-laws frequently blamed them for strabismus in the child, emphasizing the need for empathy and comfort from the family rather than criticism. Additionally, parents often seek support from others who have faced similar challenges, as this can provide psychological comfort and coping strategies. One parent noted that although her family was supportive, they did not fully understand her emotional experience. She found solace in meeting another parent of a child with strabismus at the hospital, whose shared experiences helped her realize that she was not alone. Another parent emphasized the value of peer support, mentioning that a more experienced individual had taught her effective techniques for encouraging her child to cooperate during examinations, which she found immensely helpful.

Discussion

This study captured the experiences of 12 parents (mean age 35.42 years; range 32–40) of children with strabismus, whose children (7 boys, 5 girls) had esotropia (n=2) or exotropia (n=10) with disease durations of 1.5 to 8 years. Analysis of their narratives revealed four principal themes emerged: (1) emotional distress; (2) adjustment and coping strategies encompassing division of labor; (3) multiple challenges encountered; and (4) multifaceted needs.

Attention to Emotions and Psychological Well-Being of Caregivers

The findings of this study indicate that parents of children with strabismus experience a wide range of negative emotions, including anxiety, guilt, and helplessness, particularly throughout the prolonged diagnostic and treatment processes. These results are consistent with the observations of Pang et al.[11] The emotional challenges faced by parents may be linked to the chronic nature of strabismus, frequent medical appointments, and the tendency of healthcare providers to prioritize clinical symptoms and treatment of the child, while inadvertently overlooking the psychological well-being of the parents. The emotional burdens experienced by parents, as primary caregivers, not only diminish their quality of life but may also hinder their ability to provide optimal care. In contrast, positive emotions can strengthen the psychological resilience of caregivers and their ability to navigate challenges, thereby enhancing their support for the treatment and rehabilitation of their children.[12] It is recommended that healthcare professionals implement interventions grounded in the information-knowledge-belief-behavior theory for parents of children with strabismus.[13] These interventions can assist parents in acquiring crucial disease knowledge, developing fundamental caregiving skills, fostering confidence to confront the challenges associated with the condition, and promoting a shift from negative to positive attitudes.

Psychological intervention strategies, such as mindfulness-based stress reduction therapy,[14] acceptance and commitment therapy,[15] and the Satir Model intervention,[16] can be utilized to assist parents in gradually accepting the condition of their child, adjusting to new caregiving roles, and transforming challenges into opportunities for personal growth. Additionally, given the limited understanding of the public regarding strabismus, families often face stigma and prejudice. Therefore, it is essential to enhance public awareness of strabismus and its treatment through educational lectures or free clinics. These initiatives help correct misconceptions, reduce stigma experienced by parents of affected children, and foster a more supportive medical and social environment for both children with strabismus and their families.

Enhancing Caregiver Response and Care Processes

The findings of this study suggest that most parents of children with strabismus are able to alleviate the caregiving burden on individual family members by sharing responsibilities, thereby fostering more active management of the condition and enhancing overall family dynamics. This is consistent with the research by Wang et al.[17] Advocating for a division of labor and collaborative engagement within the family is crucial for enhancing the caregiving experience and optimizing family functioning. Based on these insights, healthcare professionals are advised to promote family-centered care, facilitating the integration of daily caregiving tasks into family life routines.[18] This approach is designed to assist parents to clearly define the division of responsibilities within the family, thereby alleviating caregiving stress and preventing conflicts arising from role ambiguity. Furthermore, it is essential to teach effective stress management techniques and communication strategies to family members, enhancing the ability of the family to cope with the condition and ultimately improving overall family functionality.

Optimizing Caregiver Support and Care Quality

The findings of this study indicate that a significant number of parents of children with strabismus experience family conflicts arising from differing expectations, decision-making challenges due to inadequate information, and financial pressures related to treatment costs. These findings align with previous research by Singh.[19] Healthcare providers should consider implementing dual interventions for parents of children with strabismus, helping them set realistic short-term goals and manage expectations effectively.[20] Regular evaluations of treatment outcomes and family needs should be conducted and expectations should be adjusted accordingly to reduce potential conflicts within the family. Additionally, healthcare organizations can facilitate regular support or consultation sessions for families of children with strabismus and establish parent-child courses to promote healthy communication models among parents.

These initiatives help address information asymmetry and enable parents to make more informed decisions regarding their child's care. Moreover, the development of personalized and sustainable treatment plans is essential to ensure the safety and efficacy of interventions, taking into consideration the financial circumstances of the family and the specific needs of the child. Furthermore, assistance should be offered to parents in accessing medical assistance programs or charitable funding initiatives to help mitigate financial challenges associated with the treatment process.

Addressing Needs of Caregivers and Strengthening Support Systems

The findings of this study highlight several unmet needs among parents of children with strabismus, particularly in areas related to knowledge acquisition, access to healthcare resources, and emotional support during routine care. These findings are consistent with the findings of Sherief et al.[21] Addressing these gaps requires enhancements in health education, the optimization of resource allocation, and the provision of targeted emotional support to better meet the specific needs of this population. It is recommended that healthcare professionals prioritize health education for parents of children with strabismus with a focus on enhancing their understanding and management skills related to the condition. The content of health education should be tailored to address the specific needs of parents at different stages of caregiving. Furthermore, diverse educational approaches should be employed to equip parents with comprehensive knowledge and effective coping strategies for optimal care. Simultaneously, efforts should be made to enhance the supporting infrastructure for relevant medical resources, standardize multidisciplinary management processes for strabismus, and streamline consultation procedures for patients in both hospital and outpatient settings. Additionally, the establishment of an integrated continuous care platform connecting hospitals, communities, and families should be actively promoted to ensure that parents receive ongoing and effective nursing support following discharge.[22] Furthermore, the development of a mobile mutual assistance platform for parents of children with strabismus would facilitate communication and interaction among caregivers. Such a platform would enhance parental understanding of appropriate health behaviors and equip them with effective strategies to address the challenges encountered in the home care of their children.

Limitations and Future Directions

This study has several limitations. First, as the research was conducted at a single hospital in Beijing, the sample may not adequately represent the broader population. Second, and importantly, we were unable to account for the magnitude of strabismus, a key clinical variable. The absence of this information limits our ability to assess how the objective severity of the condition may have influenced caregivers' perceptions and concerns. Additionally, the predominance of female respondents may have introduced a singular perspective, potentially leading to bias in the findings. Finally, our findings are situated within the specific context of surgical intervention and therefore do not capture the experiences of caregivers whose children received conservative therapies, such as occlusion therapy, which is known to cause psychosocial frustration.

Future research should consider incorporating multi-center studies and integrating quantitative methodologies to provide a more comprehensive understanding of the caregiving experiences and needs of parents of children with strabismus. Moreover, exploring the influence of sex differences on caregiving experiences and needs through a gender-sensitive approach could offer valuable insights. It would also be pertinent to investigate family perceptions of emerging treatment paradigms, such as engaging dichoptic video-based therapies for amblyopia, which represent a shift towards more enjoyable and socially acceptable interventions compared to patching.[23]

Conclusions

The findings of this study indicate that parents of children with strabismus face significant emotional distress and encounter multiple caregiving challenges. Despite employing various adaptive coping strategies, gaps remain in their access to knowledge, medical resources, and emotional support. To address these unmet needs, healthcare professionals should provide targeted guidance, encourage positive coping mechanisms, and strengthen proactive responses among caregivers. Establishing a collaborative support system that integrates hospitals, families, and community resources may enhance the overall quality of care for children with strabismus.

Abbreviations

FST, Family Systems Theory.

Data Sharing Statement

All data generated or analyzed during this study are included in this article. Further enquiries can be directed to the corresponding author.

Ethics Approval and Consent to Participate

The study was conducted in accordance with the Declaration of Helsinki (as was revised in 2013). The study was approved by Ethics Committee of the Beijing Tiantan Hospital, Capital Medical University (No.KY2024-422-02). Written informed consent was obtained from all participants.

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Disclosure

The authors declare that they have no competing interests.

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