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Paediatric Medicine

PARENTAL INVOLVEMENT IN THE MANAGEMENT OF PAEDIATRIC ASTHMA: A QUALITATIVE STUDY

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ABSTRACT

Background: Paediatric asthma is a chronic respiratory condition that requires sustained management, with parents playing a pivotal role in daily care, decision-making, and long-term disease control. Despite advances in pharmacological therapy and guideline-based management, suboptimal asthma control remains common, often reflecting gaps between clinical recommendations and real-world caregiving practices. Understanding parental experiences, beliefs, and challenges is essential for strengthening family-cantered asthma care, particularly in diverse sociocultural and healthcare contexts. **Objectives:** This study aimed to explore the role of parental involvement in the management of paediatric asthma by examining caregivers' understanding, practices, emotional experiences, and interactions with healthcare and school systems using a qualitative approach. **Methods:** A qualitative study design using focus group discussions was employed at a tertiary care teaching hospital. Parents or primary caregivers of children aged 5–15 years with physician-diagnosed asthma of at least six months' duration were purposively sampled. Five focus group discussions involving 38 participants were conducted using a semi-structured discussion guide. Audio-recorded discussions were transcribed verbatim and analysed thematically using an inductive approach to identify recurring patterns, themes, and contextual influences. Data collection continued until thematic saturation was achieved. **Results:** Six major themes emerged: parental understanding and interpretation of asthma, medication management and adherence behaviour, emotional burden and caregiver stress, healthcare interaction and communication, school-related challenges and environmental triggers, and evolving parental roles and adaptive strategies. Parents demonstrated wide variability in conceptualizing asthma as a chronic condition, with many relying on symptom-based management. Fear of medication side effects, inconsistent use of controller therapy, and challenges with inhaler technique were common. Emotional stress, anxiety, and sleep disturbance were frequently reported, particularly among mothers. Communication gaps with healthcare providers and limited school-based support further influenced caregiving practices. **Conclusion:** Parental involvement in paediatric asthma management is a dynamic, multifaceted process shaped by knowledge, beliefs, emotional responses, and contextual constraints. Interventions aimed at improving asthma outcomes should move beyond information dissemination to address parental beliefs, emotional burden, and system-level barriers. Integrating caregiver perspectives into clinical care, education programs, and policy frameworks may enhance adherence, improve asthma control, and reduce the long-term burden of paediatric asthma.

KEYWORDS : Paediatric Asthma, Parental Involvement, Self-Management, Qualitative Research, Child Health, Caregiver Role

INTRODUCTION

Pediatric asthma is one of the most common chronic respiratory disorders of childhood and a major contributor to morbidity, healthcare utilization, and impaired quality of life worldwide [1,2]. Despite advances in pharmacotherapy and the widespread availability of evidence-based guidelines, a substantial proportion of children continue to experience poor symptom control, frequent exacerbations, and preventable hospitalizations [1,12]. The burden of asthma extends beyond physical symptoms, affecting school attendance, physical activity, emotional wellbeing, and family functioning, underscoring its significant psychosocial dimensions [6,7].

Unlike many chronic conditions in adults, asthma management in children is highly dependent on caregivers, particularly parents, who assume primary responsibility for daily disease management [3,6]. Parental involvement includes symptom recognition, medication administration, trigger avoidance, healthcare-seeking behavior, coordination with schools, and provision of emotional support [3,4]. Consequently, the effectiveness of pediatric asthma management is closely linked to parental knowledge, beliefs, attitudes, and caregiving practices [5,11]. Evidence suggests that inadequate parental understanding and misconceptions about asthma are associated with poor adherence, inappropriate medication use, and suboptimal disease control [13,19].

Contemporary asthma guidelines emphasize shared decision-making and family-centered care, recognizing parents as essential partners in long-term disease management [1,4]. However, translating guideline recommendations into everyday household practices remains challenging. Parents often navigate complex medication regimens, fluctuating symptom patterns, and conflicting information from healthcare providers, social networks, and digital media [8,13]. Fear of medication side effects—particularly regarding inhaled corticosteroids—remains a persistent barrier to adherence despite strong evidence supporting their safety and efficacy in children [9,16].

Most existing research examining parental involvement in pediatric asthma has employed quantitative methods, focusing on associations between parental knowledge, adherence, and clinical outcomes [4,12]. While these studies provide valuable insights, they may not fully capture the nuanced beliefs, emotional responses, and contextual constraints that influence parental decision-making in real-world settings [11]. Qualitative research methods offer a complementary approach by privileging caregiver narratives and lived experiences, enabling exploration of factors that are difficult to measure using structured instruments [8,11].

Previous qualitative studies have identified themes such as uncertainty in symptom interpretation, emotional burden of caregiving, and challenges in balancing asthma management with everyday family life [6,7]. Parental stress and anxiety have been shown to exert bidirectional effects on asthma control, influencing both caregiver behavior and child symptom perception [9]. Socio-cultural beliefs, health literacy, prior healthcare experiences, and socioeconomic constraints further shape parental engagement and confidence in managing childhood asthma [11,18]. These factors are highly context-specific and may vary across populations and healthcare systems, particularly in low- and middle-income settings [2,18].

In addition to managing asthma within the home, parents often serve as intermediaries between healthcare providers, schools, and their children [10,14]. School-based asthma management presents unique challenges, including limited staff training, restricted access to inhalers, and fear of stigma, all of which influence parental decision-making regarding physical activity and school attendance [10,14]. Although school-based interventions have demonstrated improved outcomes when parental engagement is incorporated, parents' perspectives on these collaborative arrangements remain underexplored in qualitative depth [14,20].

Despite growing recognition of the importance of caregiver involvement, there remains limited qualitative evidence exploring how parents experience and interpret their role in pediatric asthma management, particularly within diverse sociocultural contexts

[11,18]. Understanding parental perspectives is essential for designing interventions that are both clinically effective and acceptable to families [5,11].

The present study therefore aims to explore parental involvement in the management of pediatric asthma using focus group discussions to elicit in-depth caregiver perspectives. By examining parents' understanding of asthma, medication practices, emotional experiences, and interactions with healthcare and school systems, this study seeks to generate contextually grounded insights that can inform family-centered asthma care strategies and improve long-term outcomes for children with asthma.

METHODOLOGY

Study Design

A qualitative design was chosen to capture caregivers' experiences and perceptions related to paediatric asthma management.

Study Setting

The study was conducted at a tertiary care teaching hospital with a dedicated paediatric outpatient department providing structured follow-up care for children with asthma. The hospital serves a predominantly urban and peri-urban population and functions as a referral centre for paediatric respiratory conditions. Focus group discussions were conducted in a private, quiet room within the hospital premises to ensure participant comfort, confidentiality, and minimal disruption.

Study Population

The study population comprised parents or primary caregivers of children aged 5–15 years with physician-diagnosed asthma of at least six months' duration. Parents were selected as the unit of analysis because they assume primary responsibility for symptom recognition, medication administration, healthcare decision-making, and coordination with schools and healthcare providers. Both mothers and fathers were eligible to participate if they were actively involved in the child's asthma care.

Inclusion and Exclusion Criteria

Parents or primary caregivers of children with stable asthma attending routine follow-up visits were eligible for inclusion. Caregivers of children experiencing acute severe exacerbations at the time of recruitment were excluded to avoid distress-related bias and to ensure reflective participation. Parents of children with additional chronic respiratory diseases, significant neurological disorders, or other long-term medical conditions requiring complex caregiving were excluded to minimize confounding caregiving experiences.

Sampling Strategy and Sample Size

Purposive sampling was used to recruit caregivers with direct and sustained experience in managing paediatric asthma. Maximum variation sampling was employed to ensure diversity in child age, duration of asthma, perceived disease severity, parental education, and caregiving roles.

In qualitative research, sample size is guided by the principle of data saturation rather than statistical power. It was planned to conduct four to six FGDs, each comprising six to eight participants, consistent with established qualitative research methodology. Recruitment and data collection continued until thematic saturation was achieved, defined as the point at which no new themes or conceptual insights emerged in successive discussions. Saturation was reached by the fifth focus group.

Development of the Focus Group Discussion Guide

A semi-structured focus group discussion guide was developed following a comprehensive review of paediatric asthma literature and current clinical guidelines. The guide included open-ended questions exploring parental understanding of asthma, medication practices, symptom recognition, emotional burden, healthcare interactions, school-related challenges, and adaptive caregiving strategies. Probing questions were used to encourage elaboration and clarification while allowing participants to introduce issues of personal relevance. The guide was pilot-tested with two caregivers (not included in the final analysis) to ensure clarity, relevance, and cultural appropriateness.

Data Collection Procedure

Focus group discussions were moderated by a paediatrician trained in qualitative research methods and experienced in the clinical management of childhood asthma. A second researcher, with training in community medicine and qualitative inquiry, served as co-moderator and observer, documenting non-verbal cues, group dynamics, and contextual factors through detailed field notes.

Each FGD lasted approximately 60–90 minutes and was conducted in the local language to facilitate natural expression. Discussions were audio-recorded with participants' consent. The moderator maintained a facilitative role, encouraging balanced participation while avoiding leading questions or clinical correction of responses to minimize response bias.

Reflexivity and Researcher Positionality

The research team comprised clinicians directly involved in paediatric asthma care, which conferred both strengths and potential biases. To address reflexivity, the moderators engaged in reflective discussions before and after FGDs to acknowledge how their clinical roles, assumptions, and prior experiences might influence data collection and interpretation.

During data collection, moderators consciously adopted a non-judgmental stance and avoided providing medical advice during discussions to prevent shaping participants' responses. Reflexive notes were maintained throughout the study to document emerging assumptions, emotional responses, and potential influences on interpretation. These reflections were revisited during data analysis to enhance awareness of positionality and to minimize interpretive bias.

Data Management and Transcription

Audio recordings were transcribed verbatim to preserve participants' language and meaning. When discussions were conducted in the local language, transcripts were translated into English by bilingual members of the research team, with attention to maintaining contextual and cultural nuance. Transcripts were anonymized by assigning unique identification codes to participants. Accuracy was ensured by cross-checking transcripts against audio recordings.

Data Analysis and Analytic Transparency

Data were analysed using thematic analysis following the approach described by Braun and Clarke. Analysis was conducted manually to allow close engagement with the data and iterative comparison across transcripts.

Two researchers independently coded the transcripts. Initial open coding was performed line-by-line to identify meaningful units related to parental involvement and asthma management. Codes were then compared, discussed, and refined through regular analytic meetings. Discrepancies in coding were resolved through discussion and consensus, with reference to the original transcripts and field notes. Where disagreement persisted, a third senior researcher was consulted to achieve agreement.

Codes were subsequently grouped into categories and abstracted into broader themes through an inductive, iterative process. Constant comparison was employed across transcripts and focus groups to ensure consistency and depth of interpretation. An audit trail documenting coding decisions, theme development, and analytic revisions was maintained to enhance transparency and dependability.

Ensuring Rigor and Trustworthiness

Credibility was enhanced through prolonged engagement with the data, triangulation of audio recordings and field notes, and inclusion of verbatim participant quotations in the results. Dependability was ensured by maintaining a detailed audit trail of analytic decisions. Confirmability was supported through reflexive documentation and team-based analysis, minimizing individual researcher bias. Transferability was facilitated by providing detailed descriptions of the study context, participant characteristics, and research processes.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee prior to commencement of the study. Written informed consent was obtained from all participants after explaining the study objectives, procedures, voluntary nature of participation, and confidentiality safeguards. Participants were informed of their right to withdraw at any stage without any effect on their child's medical care. All study data were stored securely and accessed only by authorized members of the research team.

RESULTS

Participant Characteristics and Focus Group Profile

A total of 38 parents participated in five focus group discussions, with group sizes ranging from 7 to 8 participants. Among the participants, 26 (68.4%) were mothers and 12 (31.6%) were fathers. The mean age of caregivers was 34.7 ± 6.9 years (range: 24–49 years). The children represented had a mean age of 9.3 ± 2.8 years, and the median duration since asthma diagnosis was 3.6 years (IQR: 2–6 years).

Most parents (71.1%) reported at least one asthma exacerbation requiring unscheduled healthcare contact in the preceding year, while 39.5% reported a history of hospitalization. Data saturation was achieved by the fifth focus group, with no new themes emerging.

Theme 1: Parental Understanding and Interpretation of Asthma

Parents demonstrated considerable variability in their understanding of asthma as a disease entity. While some caregivers articulated asthma as a chronic condition requiring long-term management, many perceived it as an episodic illness that was relevant only during symptomatic periods.

"For us, asthma means when he gets wheezing. When he is fine, we feel the disease is not there."

(Mother, child aged 8 years)

Several parents equated the absence of wheeze or cough with disease resolution, leading to intermittent treatment practices.

"If there is no cough or sound in the chest, why should we give daily medicine? We think it is cured for that time."

(Father, child aged 11 years)

Difficulty in recognizing early warning signs was commonly expressed, particularly in distinguishing asthma symptoms from routine respiratory infections.

"In the beginning, we thought it was just cold and cough every time. Only when breathing becomes fast, then we realize it is asthma."

(Mother, child aged 6 years)

Parents with longer caregiving experience reported greater confidence in symptom recognition, although this confidence was often experiential rather than guideline-based.

"Now I can tell when it will worsen, but this knowledge came only after many attacks."

(Mother, child aged 12 years)

Theme 2: Medication Management and Adherence Behaviors

Medication use emerged as a central and emotionally charged aspect of caregiving. While most parents reported regular access to prescribed inhalers, consistent daily use of controller medications was variable.

Fear of inhaled corticosteroids was pervasive, particularly concerns regarding growth and long-term dependency.

"Doctor says it is safe, but when we hear 'steroid', we feel scared. What if it affects his growth?"

(Father, child aged 9 years)

Several caregivers admitted to dose modification or discontinuation once symptoms improved, often without consulting healthcare providers.

"When she improves, I slowly reduce the dose myself. Daily medicine feels too much when she is normal."

(Mother, child aged 7 years)

In contrast, reliever medications were viewed as essential and were used promptly at symptom onset.

"The blue inhaler we trust fully. Once she takes it, breathing becomes normal."

(Mother, child aged 10 years)

Challenges related to inhaler technique were frequently discussed, especially among parents of younger children.

"They showed us how to use the spacer, but at home the child does not cooperate, so I am not sure how much medicine actually goes inside."

(Mother, child aged 5 years)

Theme 3: Emotional Burden and Caregiver Stress

The emotional impact of managing a child with asthma was evident across all focus groups. Parents described persistent anxiety, particularly related to nocturnal symptoms and fear of sudden exacerbations.

"Night time is the worst. Even when he sleeps peacefully, I keep checking his breathing."

(Mother, child aged 8 years)

Sleep disturbance was commonly reported, with caregivers describing heightened vigilance during periods of poor control.

"I hardly sleep when she is coughing. Even one sound and I wake up immediately."

(Mother, child aged 6 years)

Feelings of guilt were also expressed, especially when parents perceived exacerbations as preventable.

"When he gets an attack, I keep thinking—maybe I missed something, maybe I did not give the medicine properly."

(Father, child aged 13 years)

Parents of children with recurrent hospitalizations reported ongoing anticipatory stress, even during asymptomatic periods.

"Even when she is fine, there is always fear in the back of the mind that it can happen again anytime."

(Mother, child aged 9 years)

Theme 4: Healthcare Interaction and Communication

Interactions with healthcare providers played a significant role in shaping parental confidence and engagement. Parents who experienced clear communication and continuity of care expressed greater trust in treatment plans.

"When the same doctor explains again and again, we feel confident to follow the advice."

(Father, child aged 10 years)

However, many parents perceived consultation time as insufficient to address concerns, particularly regarding long-term medication safety.

"We want to ask many questions, but OPD is crowded. Doctor is in a hurry, so we hesitate."

(Mother, child aged 7 years)

Limited understanding of structured asthma action plans was evident.

"They gave us a paper, but honestly, when symptoms increase, we just use the reliever and rush to hospital."

(Mother, child aged 11 years)

Language barriers and medical terminology further contributed to confusion.

"Sometimes the words are too technical. We nod, but inside we are not fully clear."

(Father, child aged 9 years)

Theme 5: School-Related Challenges and Environmental Triggers

School environments emerged as a major source of parental concern. Many parents expressed anxiety regarding asthma management during school hours.

"Once he goes to school, we don't know what happens there. Teachers are afraid to give inhaler."

(Mother, child aged 8 years)

Fear of stigma and restricted participation in physical activities were commonly reported.

"She wants to play like other children, but I stop her because what if she gets breathless?"

(Mother, child aged 10 years)

Environmental triggers such as dust, pollution, and seasonal changes were widely acknowledged, although parents reported limited ability to control exposures due to socioeconomic constraints.

"We know dust is a problem, but in this house we cannot avoid it completely."

(Father, child aged 12 years)

Theme 6: Evolving Parental Roles and Adaptive Strategies

Over time, many parents described a gradual transition from reactive crisis management to anticipatory care strategies.

"Earlier we used to panic, now we start medicines early when we see warning signs."

(Mother, child aged 14 years)

Caregivers with longer experience reported developing personalized routines based on prior episodes.

"Before winter starts, we become extra careful because every year symptoms increase."

(Father, child aged 11 years)

Some parents described involving older children in self-management practices to foster independence.

"Now he knows when to take the inhaler himself, but I still supervise."

(Mother, child aged 13 years)

However, concerns regarding premature transfer of responsibility were also expressed.

"She is still small. If we leave everything to her, she may forget or hide symptoms."

(Mother, child aged 9 years)

Summary of Findings

Across all focus group discussions, parental involvement in paediatric asthma management emerged as a dynamic and evolving process influenced by understanding of the disease, medication-related beliefs, emotional burden, healthcare communication, school environments, and lived caregiving experience. The verbatim narratives highlight the gap between biomedical recommendations and real-world caregiving practices, underscoring the need for empathetic, context-sensitive, and family-cantered asthma care.

Clinical Implications for Counselling Parents of Children with Asthma
The findings of this qualitative study have direct implications for how clinicians counsel parents of children with asthma in routine practice. Parental narratives revealed that gaps in understanding, medication-related fears, emotional burden, and contextual constraints substantially influence daily asthma management. Effective counseling must therefore extend beyond provision of information to address caregivers' beliefs, emotions, and lived realities.

Addressing Episodic Perceptions of Asthma

Many parents in this study conceptualized asthma as an episodic illness rather than a chronic condition, often discontinuing controller therapy when symptoms subsided. Counseling should explicitly explore caregivers' existing beliefs about asthma and gently reframe asthma as a chronic but controllable condition characterized by underlying airway inflammation. Using simple explanations, analogies, or visual aids may help bridge the gap between biomedical models and parental experiential understanding. Reinforcing that symptom absence does not equate to disease resolution is essential to improve adherence to long-term controller therapy.

Counselling Around Medications and Steroid Concerns

Fear of inhaled corticosteroids emerged as a dominant barrier to adherence, despite regular access to prescribed medications. Counseling should proactively address concerns related to growth, dependency, and long-term harm, using clear, evidence-based reassurance tailored to parental anxieties. Importantly, clinicians should acknowledge parental fears as valid rather than dismissing them, as trust-based discussions were perceived by parents as facilitating confidence in treatment decisions.

Distinguishing clearly between reliever and controller medications—emphasizing their complementary roles—may help counter the prevalent preference for symptom-driven management. Linking controller therapy to tangible goals such as uninterrupted sleep, school attendance, and prevention of hospitalizations can make preventive treatment more meaningful to caregivers.

Reinforcing Practical Skills and Action Plans

Parents frequently reported uncertainty regarding inhaler technique and limited use of written asthma action plans. Counseling encounters should therefore incorporate repeated, hands-on demonstration of inhaler–spacer use, followed by return demonstration by caregivers. Skills reinforcement at every follow-up visit is critical, as technique decay over time was evident in parental accounts.

Asthma action plans should be simplified, explained verbally in the caregiver's preferred language, and linked to clear symptom thresholds rather than abstract zones or medical terminology. Parents' reliance on reliever medication and emergency visits suggests that action plans are not consistently internalized as practical tools, underscoring the need for repeated reinforcement.

Acknowledging and Supporting Emotional Burden

The study highlighted the substantial emotional labor involved in caregiving, including anxiety, sleep disturbance, and guilt. Counseling should include brief assessment of caregiver stress and emotional wellbeing, particularly among parents of children with recurrent exacerbations or hospitalizations. Normalizing parental anxiety and providing reassurance regarding coping strategies may help reduce vigilance-related exhaustion and improve sustained engagement in care.

Where feasible, referral to psychosocial support services or peer-support groups may benefit families experiencing significant caregiver burden.

School and Context-Sensitive Counselling

Parents expressed considerable concern about asthma management during school hours, including lack of inhaler access and fear of stigma. Counseling should therefore extend beyond the clinic to include guidance on school communication, written permissions for inhaler use, and encouragement of age-appropriate participation in physical activities. Helping parents plan for known triggers, seasonal changes, and unavoidable environmental exposures can support realistic and context-sensitive management strategies.

Supporting Evolving Parental Roles

As caregiving roles evolved over time, parents described gradually involving older children in self-management while remaining cautious about premature transfer of responsibility. Counseling should support this transition by providing age-appropriate guidance on shared responsibility, reinforcing supervision while fostering child autonomy. Explicit discussion of developmental readiness can help parents navigate this transition with confidence.

Summary

Overall, the findings suggest that effective counseling in pediatric asthma must be continuous, empathetic, and tailored to parental beliefs, emotions, and contextual constraints. Integrating these insights into routine clinical practice may strengthen family-centered care, enhance adherence, and improve long-term asthma outcomes.

DISCUSSION

This qualitative study provides an in-depth exploration of parental involvement in paediatric asthma management, revealing how caregivers' understanding, beliefs, emotional responses, and contextual constraints shape everyday management practices. By integrating parental narratives, the findings illuminate the gap between biomedical recommendations and lived caregiving experiences, reinforcing the central role of parents as primary managers of childhood asthma.

Parental Conceptualization of Asthma: Episodic versus Chronic Framing

A key finding of this study is the persistent episodic framing of asthma among many parents, despite regular clinical follow-up. Several caregivers perceived asthma as a condition that “comes and goes,” discontinuing treatment in the absence of symptoms. This perception was clearly reflected in statements such as, “When he is fine, we feel the disease is not there,” underscoring how symptom absence is often equated with disease resolution. Similar beliefs have been described in prior qualitative studies, where parents rely on visible or audible symptoms rather than an understanding of underlying airway inflammation.

This episodic framing has important clinical implications, as it directly influences adherence to controller therapy. Parents who stated, “If there is no cough or sound in the chest, why should we give daily medicine?” demonstrated how biomedical concepts of chronic inflammation are not easily internalized in everyday caregiving. These findings reinforce existing evidence that educational interventions must move beyond information transfer to address parents' mental models of disease and illness.

Medication Use: Balancing Fear, Experience, and Immediate Relief

Medication management emerged as a central domain of parental involvement, shaped by both experiential learning and emotional responses. While access to prescribed inhalers was generally good, consistent use of controller medication remained suboptimal, largely driven by fear of inhaled corticosteroids. Parents' concerns were articulated poignantly: “When we hear 'steroid', we feel scared. What if it affects his growth?” Such fears persist despite strong evidence supporting the safety of inhaled corticosteroids at recommended paediatric doses and have been widely documented in the literature.

In contrast, reliever medications were viewed as reliable and reassuring, as reflected in the statement, “The blue inhaler we trust fully.” This preference for immediate symptom relief over preventive therapy highlights the experiential reinforcement of short-acting bronchodilators and helps explain why symptom-driven management persists. Parents' willingness to reduce or stop controller therapy once symptoms improved— “I slowly reduce the dose myself”—illustrates how experiential success can override medical advice.

Technique-related challenges further complicated medication use, particularly among parents of younger children. Despite prior demonstrations, caregivers expressed uncertainty about effective drug delivery at home, emphasizing the need for repeated, hands-on reinforcement during follow-up visits.

Emotional Burden and Vigilance: The Hidden Work of Caregiving

The emotional burden of managing a child with asthma was a pervasive theme across all focus groups. Parents described constant vigilance, anxiety, and sleep disruption, particularly during periods of poor control. The statement, “Night time is the worst. Even when he sleeps peacefully, I keep checking his breathing,” captures the sustained emotional labour inherent in caregiving.

Such heightened vigilance was often accompanied by guilt and self-blame, especially when parents perceived exacerbations as preventable: “I keep thinking—maybe I did not give the medicine properly.” These narratives align with previous evidence demonstrating a bidirectional relationship between parental anxiety and asthma control, where emotional distress not only responds to disease severity but also influences management behaviours.

Mothers, who constituted the majority of participants, frequently described emotional exhaustion associated with continuous monitoring and caregiving responsibility. While such vigilance may enhance early symptom recognition, prolonged caregiver stress may ultimately undermine wellbeing and sustainable disease management, highlighting the need for psychosocial support within routine asthma care.

Healthcare Communication: Trust, Time Constraints, and Action Plans

Healthcare interactions emerged as a critical determinant of parental confidence and engagement. Parents who experienced continuity of care and clear explanations reported greater trust in treatment plans, as illustrated by the comment, “When the same doctor explains again and again, we feel confident.” Conversely, limited consultation time and crowded outpatient settings constrained opportunities for dialogue, leading to unresolved concerns and uncertainty.

Notably, many parents demonstrated limited understanding of structured asthma action plans. Statements such as, “We just use the reliever and rush to hospital,” suggest that written plans are not consistently translated into practical, actionable strategies during symptom escalation. Language barriers and medical jargon further impeded comprehension, reinforcing the importance of culturally and linguistically appropriate communication.

These findings echo prior studies emphasizing that clinician–parent partnerships are foundational to effective paediatric asthma management. Simplifying action plans, reinforcing them repeatedly, and ensuring caregiver understanding are essential steps toward bridging the gap between guidelines and practice.

School Environment and Contextual Constraints

School-related challenges represented a major source of parental anxiety. Parents expressed concern about inadequate staff preparedness, restricted access to inhalers, and fear of stigma. The statement, “Teachers are afraid to give inhaler,” highlights systemic gaps that extend beyond the clinical setting.

Parents' reluctance to allow full participation in physical activities reflects ongoing fears of exercise-induced symptoms, often compounded by limited school-based support. Environmental triggers such as dust, pollution, and seasonal changes were widely acknowledged; however, parents' ability to mitigate exposures was constrained by socioeconomic realities. As one caregiver noted, “In this house we cannot avoid it completely.”

These contextual limitations underscore the need for asthma interventions that address social determinants of health and extend beyond individual-level education.

Evolution of Parental Roles and Adaptive Strategies

An important contribution of this study is its depiction of parental involvement as a dynamic, evolving process. Over time, caregivers described a shift from reactive crisis management to anticipatory strategies informed by experience. Statements such as, “Now we start medicines early when we see warning signs,” illustrate experiential learning and adaptation.

Some parents described involving older children in self-management, fostering gradual independence while maintaining supervision. However, concerns regarding premature transfer of responsibility—“She is still small… she may forget or hide symptoms”—highlight the need for age-appropriate transition frameworks in paediatric asthma care.

Strengths, Limitations, and Implications

The strengths of this study include its qualitative design, achievement of thematic saturation, and integration of caregiver narratives that provide depth and contextual richness. However, findings should be interpreted in light of certain limitations, including reliance on self-reported experiences, potential social desirability bias inherent in focus group discussions, and conduct within a single tertiary care setting, which may limit generalizability to rural or primary care contexts.

Despite these limitations, the findings have important implications for clinical practice. Effective paediatric asthma management requires sustained, empathetic engagement with caregivers' beliefs, emotions, and constraints. Integrating psychosocial support, reinforcing practical skills, and strengthening clinician–parent partnerships may enhance adherence and improve long-term outcomes.

CONCLUSION

In conclusion, this study highlights that parental involvement in paediatric asthma management is not merely a technical task but a complex, emotionally laden, and context-dependent process. Parents navigate asthma care through a combination of experiential learning, emotional vigilance, and constrained decision-making. By integrating parental perspectives into clinical care, education programs, and school-based initiatives, healthcare systems can move toward more responsive, family-cantered asthma management and reduce the long-term burden of paediatric asthma.

COREQ Reporting Compliance

This study is reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ), a 32-item checklist designed to enhance the transparency and rigor of qualitative research involving interviews and focus group discussions. The COREQ framework guided reporting of the research team characteristics, reflexivity and positionality, study design, participant selection, data collection procedures, analytic strategy, and presentation of findings.

Key elements addressed include description of researcher back-grounds and roles, purposive sampling with maximum variation, achievement of thematic saturation, verbatim transcription of audio recordings, inductive thematic analysis, inclusion of representative participant quotations, and explicit strategies to ensure rigor and trustworthiness (credibility, dependability, confirmability, and transferability). Methodological decisions and analytic processes have been described in sufficient detail to enhance transparency, reproducibility, and critical appraisal.

Table 1. Socio-Demographic Characteristics of Participating Parents (n = 38)

Variable	Category	n (%)
Gender	Mother	26 (68.4)
	Father	12 (31.6)
Age (years)	20–29	9 (23.7)
	30–39	19 (50.0)
	≥40	10 (26.3)
Educational Status	Up to Primary	8 (21.1)
	Secondary	15 (39.5)
	Graduate & above	15 (39.5)
Occupation	Homemaker	17 (44.7)
	Employed (skilled/unskilled)	21 (55.3)
Residence	Urban	29 (76.3)
	Peri-urban	9 (23.7)

Table 2. Clinical Profile of Children with Asthma Represented by Parents

Variable	Category	n (%) / Mean ± SD
Child Age (years)	Mean ± SD	9.3 ± 2.8
Duration of Asthma	<2 years	10 (26.3)
	2–5 years	17 (44.7)
	>5 years	11 (28.9)
Asthma Control (Parent-reported)	Well controlled	6 (15.8)
	Moderately controlled	24 (63.2)
	Poorly controlled	8 (21.1)
Exacerbation in past 12 months	Yes	27 (71.1)
	No	11 (28.9)
Hospitalization history	≥1 admission	15 (39.5)

Table 3. Parental Knowledge, Beliefs, and Asthma Interpretation Patterns

Aspect	Parental Response Pattern	n (%)
Conceptualization of Asthma	Chronic disease	13 (34.2)
	Episodic illness	18 (47.4)
	Uncertain	7 (18.4)
Trigger Awareness	Clear identification	16 (42.1)
	Partial awareness	14 (36.8)
	Poor awareness	8 (21.1)
Early Symptom Recognition	Confident	14 (36.8)
	Inconsistent	24 (63.2)
Use of Written Action Plan	Regular	12 (31.6)
	Irregular / None	26 (68.4)

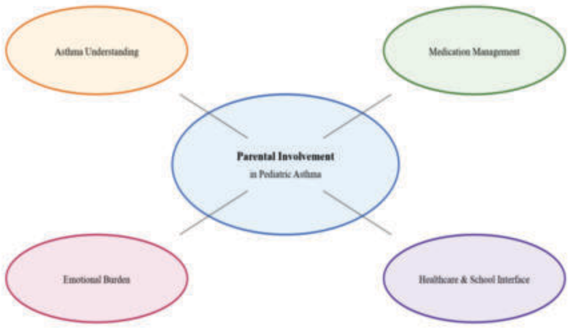
Table 4. Medication Practices and Adherence-Related Behaviors

p-	Category	n (%)
Access to Prescribed Inhalers	Regular access	34 (89.5)
	Irregular access	4 (10.5)
Controller Medication Use	Daily as prescribed	22 (57.9)
	Intermittent	16 (42.1)
Reliever Use	Prompt at symptoms	35 (92.1)
Fear of Steroid Side Effects	Present	21 (55.3)
Dose Modification without Advice	Yes	14 (36.8)
Correct Inhaler Technique (self-reported)	Confident	23 (60.5)
	Uncertain	15 (39.5)

Table 5. Summary of Major Themes Identified from Focus Group Discussions

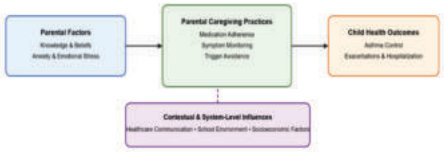
Theme	Core Issues Identified
Understanding of Asthma	Episodic vs chronic perception, symptom-based interpretation
Medication Management	Fear of steroids, preference for relievers, technique challenges
Emotional Burden	Anxiety, sleep disturbance, caregiver guilt, vigilance fatigue
Healthcare Interaction	Limited consultation time, communication gaps, continuity of care
School & Environment	Inhaler access at school, stigma, pollution, housing constraints
Adaptive Caregiving	Experiential learning, anticipatory planning, gradual child involvement

Figure 1. Thematic Map of Parental Involvement in Pediatric Asthma Management



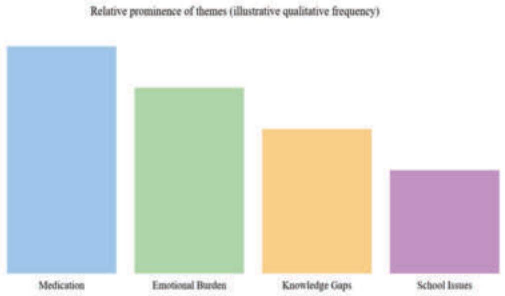
The figure illustrates interconnected thematic domains identified through focus group discussions.

Figure 2. Conceptual Framework of Parental Involvement in Pediatric Asthma Management



This conceptual framework illustrates how parental knowledge, beliefs, and emotional responses influence caregiving practices, which in turn affect pediatric asthma outcomes, within broader healthcare and social contexts.

Figure 3. Relative Distribution of Major Themes Across Focus Groups



Bars represent relative emphasis of themes discussed across focus groups.

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Conflict of Interest

The authors declare that they have no competing interests or conflicts of interest relevant to this study.

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