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MOTHERS AS GATEKEEPERS: THE SOCIAL ROLE OF WOMEN IN SHAPING CHILDREN'S ORAL HEALTH

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ABSTRACT

Background: Mothers serve as primary caregivers and play a pivotal role in shaping children's oral health behaviors. Despite their central role, limited research exists on how maternal knowledge, attitudes, practices, and socio-cultural factors influence children's oral hygiene in Pakistan.

Objective: This study aimed to explore mothers' roles as gatekeepers of children's oral health, examining knowledge, behaviors, socio-cultural influences, and barriers to effective oral health promotion.

Methods: A qualitative research design was employed in urban and rural areas of District Nowshehra, Khyber Pakhtunkhwa, Pakistan. Purposive and snowball sampling identified 28 mothers of children aged 3–12 years (16 rural, 12 urban). Data collection included 18 in-depth interviews (IDIs) and 3 focus group discussions (FGDs), conducted in Pashto/Urdu, audio-recorded, transcribed verbatim, and supplemented by field notes. Reflexive thematic analysis (Braun & Clarke, 2021) using NVivo 12 was applied to identify themes and sub-themes. Methodological rigor was ensured through prolonged engagement, triangulation, peer debriefing, member checking, and audit trails.

Results: Analysis revealed five interrelated themes: (1) mothers as primary health decision-makers, reflecting responsibility and autonomy in oral health decisions; (2) knowledge gaps and mixed attitudes, indicating uneven oral health literacy and reliance on informal sources; (3) modeling and habit transmission, demonstrating the impact of maternal routines on children's habits; (4) socio-cultural expectations and family influence, highlighting extended family pressures and cultural norms; and (5) barriers to effective promotion, including financial, geographic, time, and behavioral constraints.

Conclusion: Mothers are central gatekeepers of children's oral health, yet their effectiveness is influenced by knowledge gaps, socio-cultural norms, and structural barriers. Interventions that enhance maternal oral health literacy, engage families, and improve access to preventive services may promote sustainable oral hygiene behaviors in children.

INTRODUCTION

Oral health is a critical component of overall health and well-being in children, influencing growth, nutrition, and quality of life (Siddiqui et al., 2021; Azfar et al., 2023). Despite its importance, childhood dental caries and poor oral hygiene remain prevalent in low- and middle-income countries, including Pakistan, where socio-economic disparities, limited access to dental care, and insufficient health literacy contribute to suboptimal outcomes (Khail et al., 2022; Shad et al., 2023). National surveys report that dental caries affects approximately 50–60% of Pakistani children aged 3–12 years, with higher prevalence in rural areas and among children from lower socio-economic backgrounds (Irfan et al., 2023; Wazir & Orakzai, 2023). These statistics indicate an urgent need to address both behavioral and structural determinants of oral health in early childhood.

Parents, particularly mothers, play a pivotal role in shaping children's oral health behaviors through supervision, modeling, and health-related decision-making (Iqbal et al., 2022; Alzahrani et al., 2024). Maternal oral health literacy—the ability to obtain, understand, and apply knowledge regarding oral hygiene and preventive care—has been shown to strongly influence children's brushing frequency, dietary habits, and dental service utilization (Gudipaneni et al., 2024; Irfan et al., 2023). In Pakistan, maternal knowledge is often uneven, with misconceptions about the necessity of preventive dental visits and reliance on informal advice from family members or social media, which can perpetuate harmful practices (Iqbal et al., 2022; Shad et al., 2023).

Socio-cultural norms and family dynamics further shape maternal gatekeeping roles. In collectivist Pakistani households, extended family members, particularly grandparents, influence children's diets and oral care routines, sometimes undermining maternal guidance (Wazir & Orakzai, 2023; Khail et al., 2022). Gendered caregiving expectations often place the primary responsibility for children's oral health on mothers, while fathers are less engaged in routine supervision and preventive care (Alkhtib et al., 2025). Consequently, maternal capacity to promote optimal oral health is intertwined with social, cultural, and familial contexts, making it essential to understand these influences when designing interventions.

Structural barriers, including limited access to dental services, high costs, and geographic constraints, exacerbate challenges in maintaining children's oral health, particularly in rural areas (Azfar et al., 2023; Siddiqui et al., 2021). Children's resistance to brushing and fear of dental procedures further complicate efforts to instill consistent oral hygiene habits, underscoring the need for family- and community-level interventions (Alzahrani et al., 2024; Gudipaneni et al., 2024).

While international research highlights the significance of parental influence, there is limited evidence specifically examining maternal gatekeeping in children's oral health in Pakistan. Understanding mothers' knowledge, attitudes, practices, and the socio-cultural and structural barriers they face is crucial for developing targeted public health strategies. This study, therefore, explores the role of mothers as gatekeepers in shaping their children's oral health behaviors, offering insights for interventions aimed at reducing dental caries and improving preventive practices among Pakistani children.

METHODOLOGY

Research Design

This study employed a qualitative research design to explore the role of mothers as gatekeepers in shaping their children's oral health. A qualitative approach was selected because it facilitated in-depth understanding of mothers' perceptions, experiences, and practices, which cannot be fully captured via

quantitative instruments (Creswell & Poth, 2023). Moreover, in similar studies qualitative research approach has been largely used (Naz et al., 2025; Riaz et al., 2024a), thus providing justification to be used in the current study as well. The design followed an interpretive paradigm, emphasizing meaning-making and context.

Study Setting and Population

The study was conducted in both urban and rural settings of District Nowshehra, Khyber Pakhtunkhwa, Pakistan. The participants were mothers who served as the primary caregivers of children aged 3 to 12 years. Mothers from diverse socioeconomic backgrounds, educational levels, and family structures were sought to ensure a range of perspectives on children's oral health practices.

Sampling Strategy

Purposive sampling was used to select the participants (Riaz et al., 2024b; Naz et al., 2024b) who met the inclusion criteria: being the mother and primary caregiver of a child aged 3-12 years and involved in daily hygiene and dietary practices. Snowball sampling technique was employed to reach additional participants in rural communities. Sample size determination was guided by the principle of data saturation: interviews and focus group discussions were conducted until no new themes emerged (Guest, Bunce, & Johnson, 2020).

Data Collection

Data collection comprised semi-structured in-depth interviews (IDIs) and focus group discussions (FGDs) undertaken between [March] and [May] 2025. The interview guide explored mothers' knowledge, attitudes, behaviours and barriers regarding their children's oral health; their own oral-health practices; and the socio-cultural and economic influences on their gatekeeper role. FGDs provided a forum to explore shared norms, collective barriers and facilitators among mothers in community settings. All sessions were conducted in Pashto/Urdu, audio-recorded with consent, transcribed verbatim, and supplemented by field notes capturing non-verbal cues.

Data Analysis

Thematic analysis (Afridi et al., 2025; Ishtiaq et al., 2025; Amin et al., 2025; Naz et al., 2024a) following the reflexive approach of Braun & Clarke (2021) was used to analyze the qualitative data. The six-phase process was adhered to: (1) familiarization with the data through reading and re-reading transcripts; (2) generating initial codes; (3) searching for themes by collating codes; (4) reviewing themes in relation to coded data and entire dataset; (5) defining and naming themes; (6) producing the final report. NVivo 12 software was used to assist data organization and coding. Reflexivity was maintained throughout by keeping analytic memos and engaging in peer de-briefing.

Research Rigor and Validation Strategies

To ensure the methodological rigor of this qualitative study, strategies aligned with established qualitative research standards were applied (Lincoln & Guba, 1985; Creswell & Poth, 2023). Credibility was strengthened through prolonged engagement with participants and the use of methodological triangulation involving semi-structured interviews and focus group discussions. Peer debriefing took place throughout the analysis phase to challenge assumptions and enhance analytic transparency.

To support dependability and confirmability, an audit trail was maintained, including raw transcripts, coding iterations, analytic memos, and documentation of methodological decisions. Researcher reflexivity was embedded throughout the study to minimize bias and ensure that interpretations remained grounded in participants' perspectives rather than researcher assumptions. Member checking was conducted with a subset of mothers, who reviewed preliminary themes to

verify that interpretations accurately reflected their experiences and meanings.

Ethical Considerations and Limitations of the Study

Ethical principles of autonomy, respect, beneficence, and nonmaleficence guided the research process (Naz et al., 2025; Riaz et al., 2024b). Participants were fully informed about the purpose of the study, the voluntary nature of participation, and their right to withdraw at any stage without explanation or consequence. Prior to data collection, written informed consent was obtained from all participating mothers, and verbal assent was requested from children where their involvement was relevant. Confidentiality was ensured through the use of pseudonyms and the removal of identifying information from transcripts and reports. All digital and printed materials were securely stored on password-protected systems accessible only to the research team.

Despite careful execution, several limitations should be acknowledged. As a qualitative study, the findings are contextually embedded and not intended for statistical generalization. Instead, they offer depth, nuance, and contextual richness that may inform transferability to similar socio-cultural settings. The reliance on self-reported narratives may have introduced social desirability bias, particularly given the sensitive nature of parenting practices and oral health responsibilities. Although strategies such as triangulation, reflexive practice, and validation procedures were employed to mitigate these influences, the potential for subjective distortion remains inherent in interpretive inquiry. Additionally, cultural norms surrounding caregiving roles may have shaped responses, with some mothers potentially framing their caregiving practices in ways consistent with perceived expectations rather than actual behaviour.

Despite these limitations, the study provides meaningful insights into the social and cultural factors shaping mothers' roles as gatekeepers in children's oral health and contributes valuable knowledge to the growing field of maternal influence on child well-being.

RESULTS

Data from 18 in-depth interviews (IDIs) and 3 focus group discussions (FGDs) with 28 mothers (16 rural, 12 urban) revealed that mothers play a pivotal role as gatekeepers in shaping their children's oral health. Analysis generated five interrelated themes highlighting decision-making responsibility, knowledge and attitudes, habit transmission, socio-cultural influences, and barriers to oral health promotion. The themes are described below, supported by illustrative participant excerpts.

1. Mothers as Primary Health Decision-Makers

Mothers consistently perceived themselves as the principal custodians of their children's oral health. They were responsible for establishing daily hygiene routines, purchasing oral care products, and making decisions regarding dental visits. Fathers were generally uninvolved, leaving mothers to exercise authority in all matters related to oral hygiene.

"I make sure my children brush in the morning and before bed. My husband doesn't remind them." (IDI 5, Rural)

"When it comes to dental visits, it is always me who decides the timing and takes them to the clinic." (FGD 2, Urban)

This sense of responsibility underscores mothers' central gatekeeping role, but it also reflects the gendered expectations in household health management, particularly in rural areas where mothers often manage both domestic responsibilities and childcare independently.

2. Knowledge Gaps and Mixed Attitudes Toward Oral Health

Although mothers recognized the importance of brushing, their knowledge was uneven,

particularly regarding correct techniques, frequency, and the timing of dental visits. Preventive care was rarely considered; oral health was often associated with pain or visible decay. Misconceptions about the inevitability of cavities and reliance on informal knowledge sources, such as older family members or social media, further influenced maternal practices.

"I tell my child to brush once in the morning. I don't know if two times is necessary." (IDI 11, Rural)

"My mother told me it is normal for children to have cavities, so I thought it was okay." (FGD 1, Urban)

These findings suggest that mothers' beliefs, rather than evidence-based guidance, predominantly shaped children's oral health behaviors.

3. Modeling and Habit Transmission Through Daily Routines

Mothers' own oral hygiene practices had a strong influence on their children's habits. Those who maintained consistent personal routines were more successful in instilling regular brushing in their children. Early childhood routines, particularly when mothers directly assisted with brushing, were crucial in habit formation. As children aged, mothers gradually transferred responsibility, occasionally resulting in lapses in oral hygiene adherence.

"I brush after every meal, so my daughter also started brushing regularly." (IDI 7, Rural)

"Now my son brushes by himself. Sometimes he forgets, and I have to remind him." (FGD 3, Urban)

This theme highlights the interplay between maternal modeling, early habit formation, and the gradual shift toward child autonomy.

4. Socio-Cultural Expectations and Family Influence

Mothers' efforts were heavily influenced by broader socio-cultural norms and family dynamics. Extended family members, particularly grandparents, often undermined maternal guidance by offering sweets or discouraging restrictive practices. Cultural norms around politeness and respect further constrained mothers' ability to enforce oral health routines consistently.

"I try to stop my child from eating too many sweets, but my mother-in-law always gives them to him." (IDI 2, Rural)

"It is rude to refuse sweets when relatives offer them, so I allow it sometimes." (FGD 1, Urban)

These findings illustrate how social norms and family pressures can both shape and limit maternal gatekeeping, emphasizing the cultural embeddedness of oral health behaviors.

5. Barriers to Effective Promotion of Oral Health

Despite their central role, mothers faced multiple challenges in promoting oral health. Financial constraints limited the purchase of quality oral care products and regular dental visits. Rural mothers highlighted geographic access barriers, whereas urban mothers emphasized cost and time limitations. Children's resistance to brushing and fear of dental procedures further complicated these efforts.

"The clinic is far, and we cannot afford regular check-ups, so I take my child only when there is pain." (IDI 14, Rural)

"Sometimes they refuse to brush, and I have to struggle to make them do it." (FGD 2, Urban)

These barriers demonstrate that while mothers act as gatekeepers, structural, economic, and behavioral constraints can significantly impact the effectiveness of their efforts.

Table 1. Themes, Sub-Themes

Theme	Sub-Themes	Illustrative Excerpts
Mothers as Primary Health Decision-Makers	Responsibility for children; Father's involvement	*"I make sure my children brush in the morning and before bed. My husband doesn't remind them."* (IDI 5, Rural)
Knowledge Gaps and Mixed Attitudes	Awareness of brushing; Misconceptions; Sources of knowledge	*"I tell my child to brush once in the morning. I don't know if two times is necessary."* (IDI 11, Rural)
Modeling and Habit Transmission	Mothers' personal habits; Early routines; Shifting responsibility	*"I brush after every meal, so my daughter also started brushing regularly."* (IDI 7, Rural)
Socio-Cultural Expectations and Family Influence	Family pressures; Cultural food practices; Social norms	*"I try to stop my child from eating too many sweets, but my mother-in-law always gives them to him."* (IDI 2, Rural)
Barriers to Effective Promotion	Financial constraints; Access; Time; Children's resistance	*"The clinic is far, and we cannot afford regular check-ups, so I take my child only when there is pain."* (IDI 14, Rural)

DISCUSSION

The present study highlights the multifaceted role of mothers as gatekeepers of their children's oral health and provides nuanced insights into the social, cultural, and structural factors shaping maternal influence. Mothers were found to exercise substantial decision-making authority, model oral hygiene behaviors, and mediate access to dental services, yet their practices were constrained by knowledge gaps, socio-cultural norms, and structural barriers.

Maternal Decision-Making and Gatekeeping

Mothers in this study consistently acted as the primary decision-makers regarding their children's oral health. This finding aligns with research from Pakistan and other South Asian contexts, which demonstrates that maternal agency strongly influences the timing of dental visits, routine supervision of brushing, and overall oral health behaviors in children (Alkhtib et al., 2025; Iqbal et al., 2022). Mothers' central role in daily oral hygiene reflects broader patterns of gendered caregiving responsibilities common in collectivist cultures, where fathers and other family members often play a limited role in routine health maintenance (Folayan et al., 2024).

Knowledge, Misconceptions, and Oral Health Literacy

Despite their pivotal role, many mothers demonstrated partial knowledge and misconceptions regarding oral health practices, including the appropriate frequency of brushing and preventive dental care. Similar findings have been reported in recent studies, indicating that maternal oral health literacy is often inconsistent, particularly in low- and middle-income countries (Alzahrani et al., 2024; Iqbal et al., 2022). Mothers in our study often relied on informal sources, such as family advice or social media, which may perpetuate inaccurate beliefs (Gudipaneni et al., 2024). This underscores the importance of targeted interventions to enhance maternal oral health literacy and correct prevalent misconceptions.

Modeling Behaviors and Habit Formation

Our findings indicate that maternal behaviors significantly influence children's oral hygiene habits. Mothers who maintained consistent personal routines were more successful in establishing regular brushing in their children. This result is consistent with studies showing that parental modeling of oral health behaviors directly affects children's adherence to preventive practices (Alzahrani et al., 2024; Gudipaneni et al., 2024). Early childhood routines, facilitated by maternal supervision, are critical for habit formation, whereas the gradual transfer of responsibility to older children sometimes led to lapses in adherence.

Socio-Cultural and Family Influences

Socio-cultural expectations and family dynamics played a crucial role in shaping mothers' gatekeeping capacity. Extended family members, particularly grandparents, often undermined maternal guidance, for instance, by offering sweets or discouraging dietary restrictions. This resonates with prior research showing that maternal efforts to enforce oral health practices can be challenged by family norms and social expectations (Alkhtib et al., 2025; Folayan et al., 2024). These findings highlight the need for family-inclusive interventions that account for intra-household dynamics.

Barriers to Effective Oral Health Promotion

Participants reported several structural and behavioral barriers to promoting oral health, including financial limitations, geographic access issues, time constraints, and children's resistance to brushing. These barriers are consistent with the literature, which identifies socioeconomic status, access to care, and parental workload as critical determinants of child oral health outcomes (Irfan et al., 2023; Alrashdi, 2024). Addressing these challenges requires a combination of community-based services, subsidized preventive care, and behavioral support programs for both mothers and children.

CONCLUSION

The findings of this study highlight the critical role of mothers as gatekeepers in shaping their children's oral health. Mothers exert substantial influence through decision-making, modeling daily oral hygiene behaviors, and supervising children's routines. However, their effectiveness is moderated by multiple factors, including gaps in oral health knowledge, socio-cultural norms, family dynamics, and structural barriers such as limited access to affordable dental care. These results underscore the importance of considering maternal agency within the broader social and environmental context when designing interventions aimed at improving child oral health outcomes. By acknowledging mothers' central role, public health strategies can leverage maternal influence to promote sustainable preventive behaviors and reduce the prevalence of oral diseases among children.

Recommendations

Based on the study findings, the following recommendations are proposed for policy, practice, and future research:

1. **Enhance Maternal Oral Health Literacy**: Public health programs should provide culturally tailored education for mothers that targets both knowledge and practical skills, including effective tooth-brushing techniques, dietary guidance, and preventive dental care practices.
2. **Implement Family-Inclusive Interventions**: Strategies that engage fathers, grandparents, and other family members can help create a supportive environment for children's oral health practices, mitigating the influence of conflicting socio-cultural expectations.
3. **Address Structural Barriers** Policy initiatives should focus on improving access to affordable and community-based dental services, particularly in rural and underserved areas. Mobile dental clinics subsidized

preventive care, and outreach programs can reduce financial and geographic barriers.

4. **Support Maternal Lifestyle Interventions**: Integrating interventions that address maternal lifestyle factors such as stress management, habit-building, and self-care—may enhance mothers' capacity to consistently supervise and model oral health behaviors for their children.

5. **Future Research Directions**: Longitudinal and mixed-methods studies are recommended to establish causal links between maternal behaviors and children's oral health outcomes. Research including fathers and other family members could provide a more comprehensive understanding of household dynamics influencing maternal gatekeeping.

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