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Original Article

Mother's Knowledge And Anxiety Regarding Early Menarche In Children

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ABSTRACT

Early menarche, defined as the onset of menstruation before 8 years of age, poses significant physical and psychological challenges for children and their families.Maternal knowledge and preparedness play crucial roles in managing early puberty effectively.Objective: To assess mothers' knowledge regarding early menarche and evaluate their anxiety levels and preparedness in managing menstrual health for their daughters. Methods: A cross-sectional survey was conducted among 29 mothers of female children using a structured questionnaire comprising demographic data, 15 knowledge-based items, and 10 anxiety/attitude items on a 5-point Likert scale.Results: The mean knowledge score was 14.45±0.74 out of 15 (96.3%). Despite high knowledge levels, mothers reported moderate anxiety, particularly regarding their child's emotional changes (mean: 3.21), safety during puberty (mean: 3.10), and lack of knowledge about puberty (mean: 2.79). Confidence in managing puberty was moderate (mean: 3.38). Conclusion: While mothers demonstrate excellent knowledge about early menarche, significant anxiety persists, highlighting the need for targeted psychosocial support alongside educational interventions.

Keywords: Early menarche, maternal knowledge, anxiety, menstrual hygiene, puberty education.

INTRODUCTION

Early menarche, the onset of menstruation before 8 years of age, represents a significant deviation from normal pubertal development. The normal age of menarche ranges between 10–14 years, with variations influenced by genetic, nutritional, and environmental factors[1]. Early puberty has been associated with various psychosocial challenges including emotional stress, social stigma, and difficulties in adapting to rapid physical changes[2].Mothers serve as primary caregivers and educators for children experiencing early menarche. Their knowledge levels, attitudes, and anxiety regarding this condition significantly influence the child's adaptation and psychological well-being. Despite the critical role of maternal preparedness, limited research has examined the dual dimensions of knowledge and anxiety among mothers of children with or at risk of early menarche.

OBJECTIVES

1. Assess mothers' knowledge regarding early menarche, its causes, consequences, and management
2. Evaluate anxiety levels and preparedness among mothers
3. Identify areas requiring targeted intervention

METHODOLOGY

Study Design and Setting

Cross-sectional descriptive study conducted through structured questionnaire administration.

Participants

A total of 29 mothers of female children participated in the study. Inclusion criteria: mothers with female children aged 6–14 years. Convenience sampling was employed.

Instruments: A structured questionnaire comprising three sections:

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- Section A**:** Socio-demographic characteristics (8 items)
- Section B**:** Knowledge assessment (15 items) covering definition, normal age, causes, consequences, physical/emotional changes, menstrual hygiene practices, and maternal roles
- Section C**:** Anxiety and preparedness assessment (10 items) rated on a 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree)

Scoring

- Knowledge items: 1 point for each correct response, total score 0–15
- Anxiety items: Higher scores indicate greater agreement with the statement

STATISTICAL ANALYSIS

Descriptive statistics including frequencies, percentages, means, standard deviations, and medians were calculated.

RESULTS

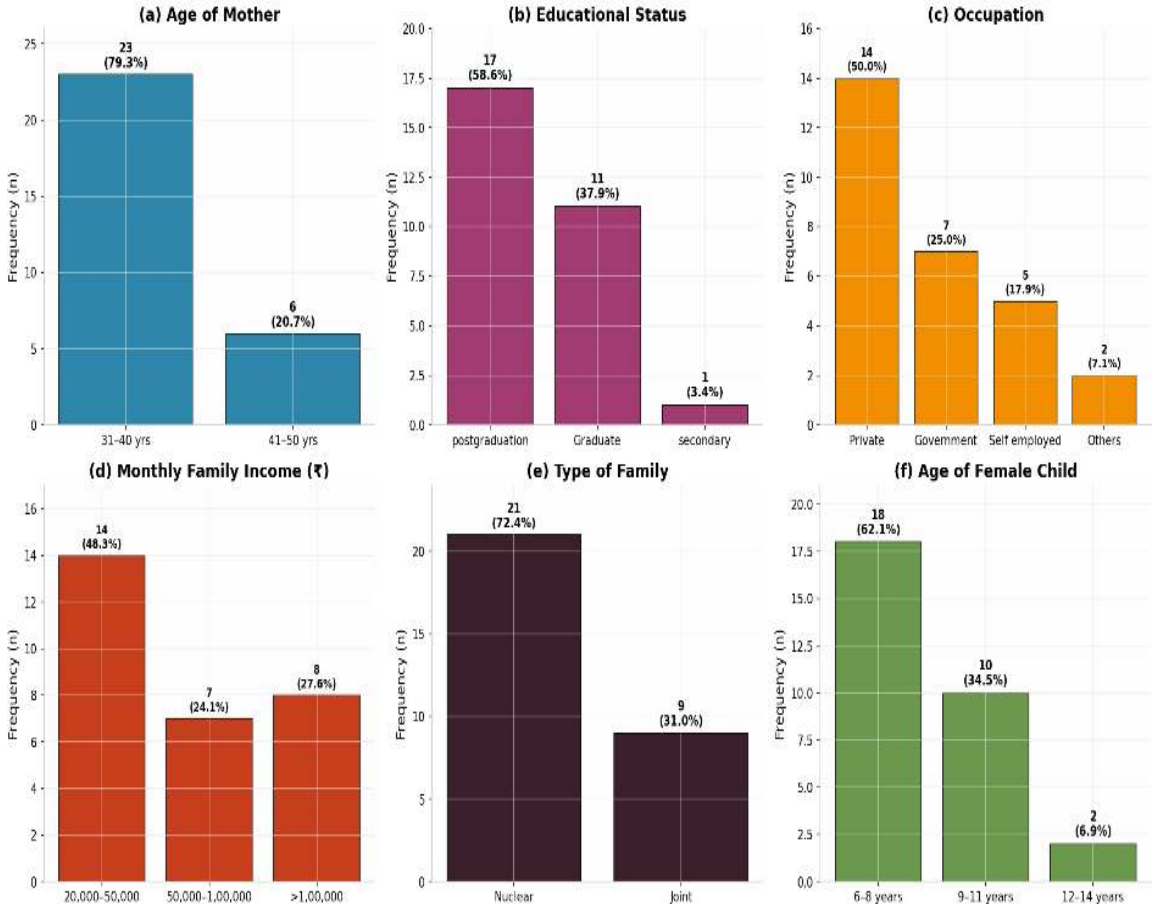
Socio-Demographic Characteristics

TABLE

Variable	Category	n (%)
Age of mother	31–40 years	23 (79.3)
	41–50 years	6 (20.7)
Educational status	Postgraduate	17 (58.6)
	Graduate	11 (37.9)
	Secondary	1 (3.4)
Occupation	Private sector	14 (50.0)
	Government	7 (25.0)
	Self-employed	5 (17.9)
	Others	2 (7.1)
Monthly family income	₹20,000–50,000	14 (50.0)
	₹50,000–1,00,000	7 (25.0)
	>₹1,00,000	7 (25.0)
Type of family	Nuclear	20 (69.0)
	Joint	8 (27.6)

	Both	1 (3.4)
Number of children	One	11 (37.9)
	Two	18 (62.1)
Age of female child	6–8 years	17 (60.7)
	9–11 years	9 (32.1)
	12–14 years	2 (7.1)
Variable	Category	n (%)
Previous information about menarche	Yes	23 (82.1)
	No	5 (17.9)
	Yes/No	1 (3.6)

Figure 1: Socio-Demographic Profile of Study Participants (n=29)



1.1 Sources of Information **Table**

Source	n	%
Health personnel	10	34.5
Family	8	27.6
School	7	24.1
Media	6	20.7
Others	3	10.3

1.2 Knowledge Assessment

Knowledge Item	Correct n	Total n	Correct %
Menarche refers to: First menstruation	28	29	96.6
The normal age of menarche is: 10–14 years	27	29	93.1
Early menarche means: Before 8 years	27	29	93.1
One cause of early menarche is: Hormonal changes	29	29	100.0
Early menarche may lead to: Emotional stress	28	29	96.6
Physical changes before menarche include: Breast development	28	28	100.0
Emotional changes may include: Mood swings	29	29	100.0
Role of mother includes: Providing guidance	29	29	100.0
Hand washing during menstruation: Before and after changing pads	29	29	100.0
Early education helps: Reduce anxiety	29	29	100.0
Tight/unclean undergarments may cause: All of the above	25	29	86.2
Early menarche requires education regarding: All of the above	28	29	96.6
Practice for menstrual hygiene: All of the above	27	29	93.1
Pad changing frequency: Every 4–6 hours	28	29	96.6
Safest menstrual absorbent: Clean sanitary pads	28	28	100.0

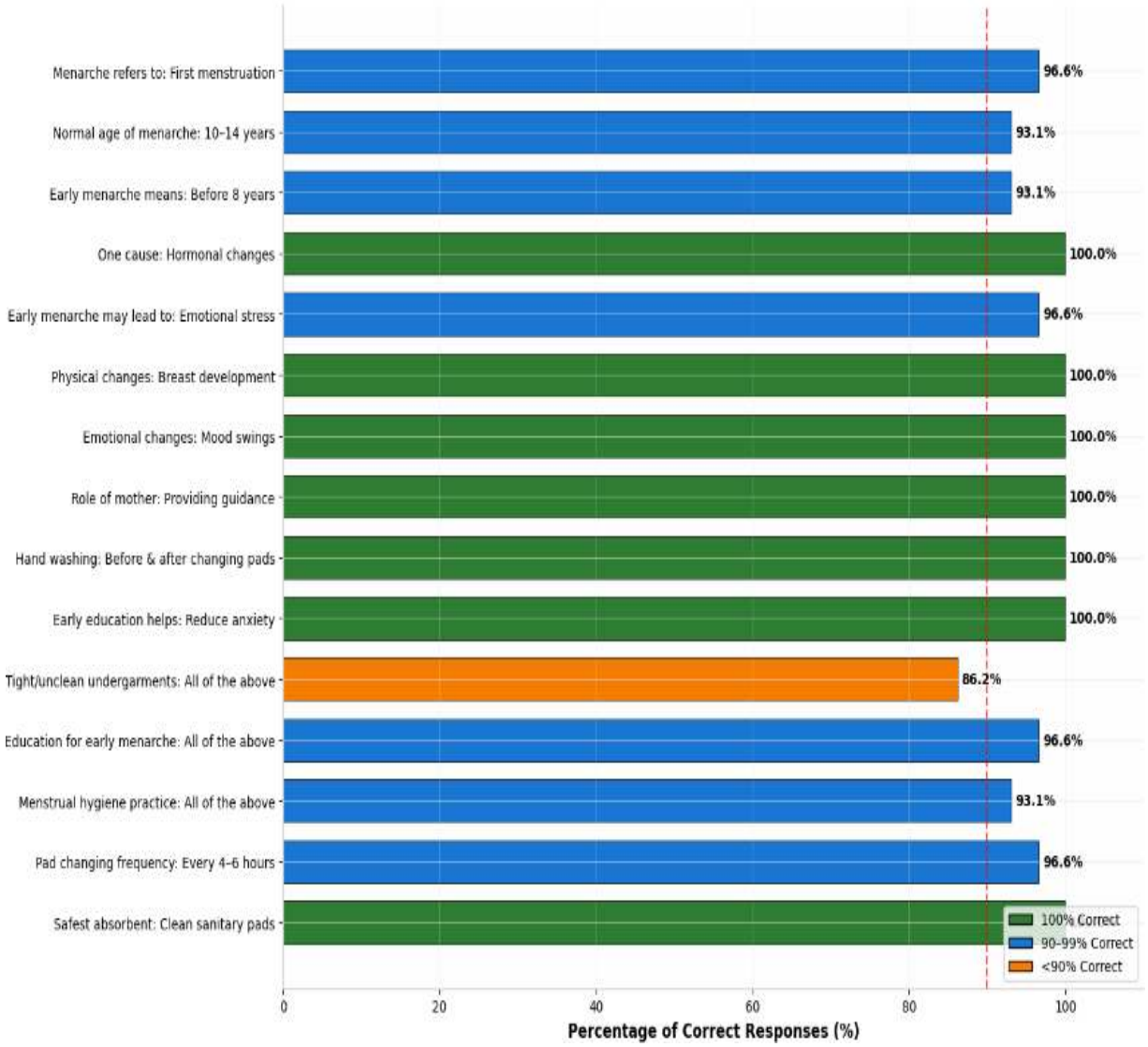
Overall Knowledge Score**:** Mean 14.45 ± 0.74 (Range: 13–15; Median: 15; Mean percentage: 96.3%)

Knowledge Score Distribution:

TABLE

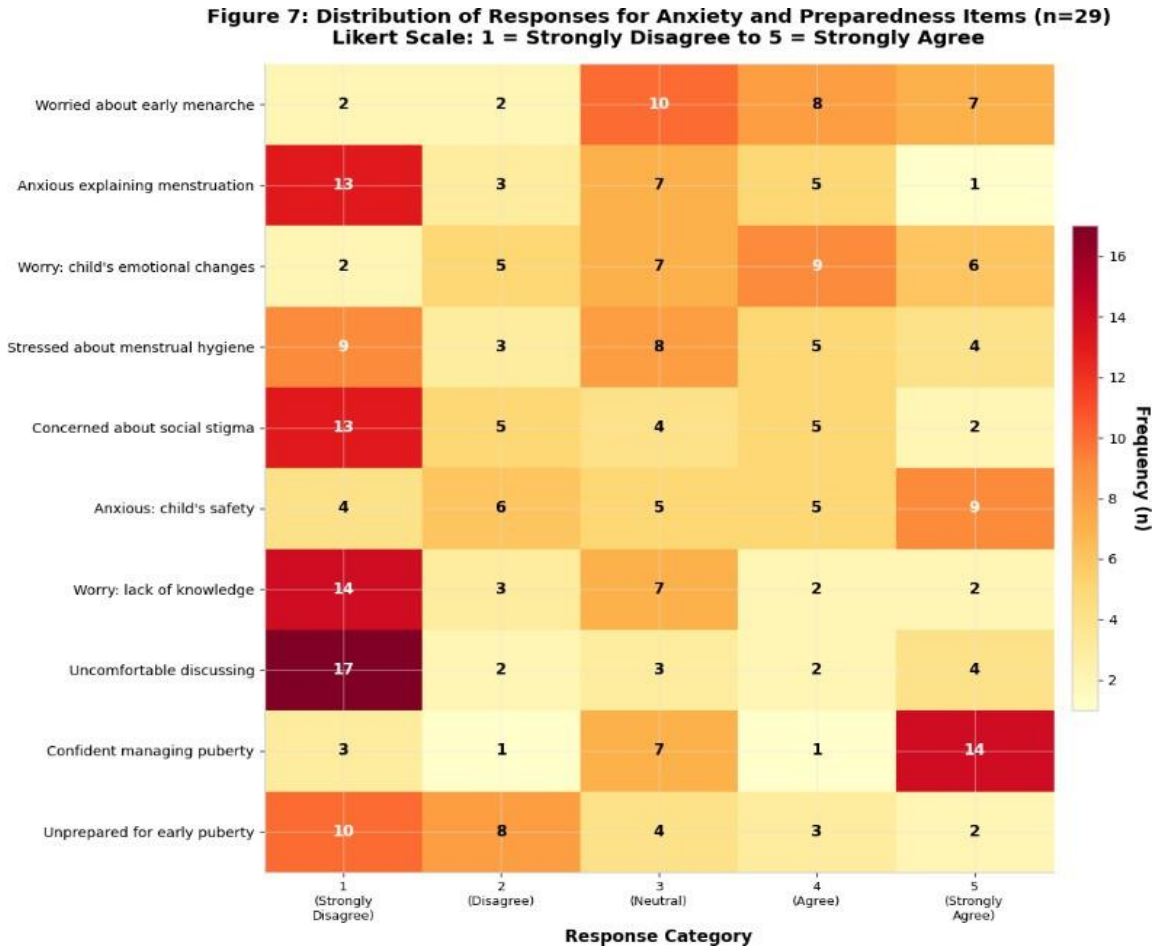
Score	n	%
13/15	4	13.8
14/15	8	27.6
15/15	17	58.6

Figure 2: Knowledge Assessment Scores by Item (n=29)



1.3 Anxiety and Preparedness Assessment

TABLE



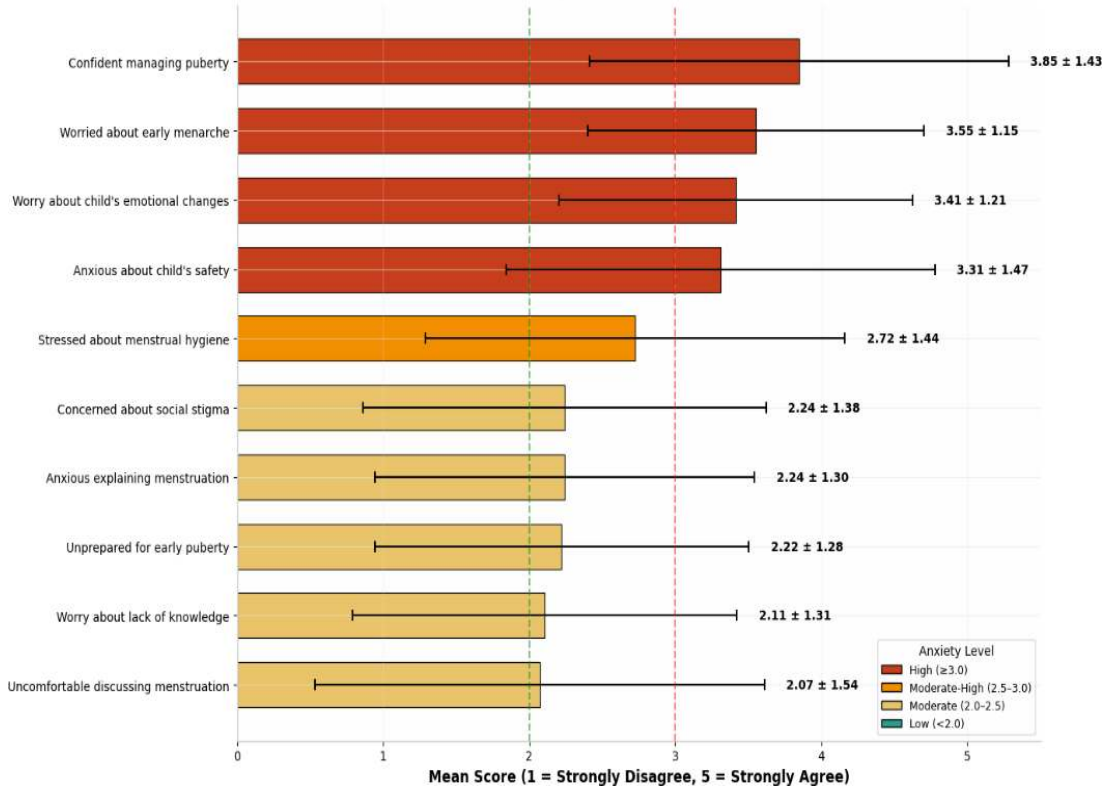
Statement	Mean	Median	SD	Interpretation
I feel worried about my child attaining early menarche	3.55	3.0	1.14	Moderate worry
I am anxious about explaining menstruation to my child	2.14	1.0	1.24	Low anxiety
I worry about my child's emotional changes	3.21	3.0	1.28	Moderate worry
I feel stressed about maintaining menstrual hygiene for my child	2.79	3.0	1.38	Moderate stress
I am concerned about social stigma related to early menarche	2.38	2.0	1.24	Low-moderate concern

I feel anxious about my child's safety during puberty	3.10	3.0	1.35	Moderate anxiety
I worry about lack of knowledge regarding puberty	2.79	3.0	1.28	Moderate worry
I feel uncomfortable discussing menstruation	2.07	1.0	1.33	Low discomfort
I feel confident in managing my child's puberty	3.38	5.0	1.54	Moderate confidence
I feel unprepared to handle early puberty issues	2.24	2.0	1.30	Low-moderate unpreparedness

Key Findings from Anxiety Assessment:

- **Highest anxiety:** Worry about child attaining early menarche (Mean: 3.55)
- **Second highest:** Worry about child's emotional changes (Mean: 3.21)
- **Third highest:** Confidence inversely related—moderate confidence (Mean: 3.38)
- **Lowest anxiety:** Discomfort discussing menstruation (Mean: 2.07)
- **Notable:** 58.6% of mothers scored maximum knowledge, yet anxiety persists across multiple domains

Figure 4: Anxiety and Preparedness Levels Among Mothers (n=29)



2. DISCUSSION

2.1 Demographic Profile

The study predominantly included educated mothers (96.5% with graduate or higher education), reflecting an urban, educated demographic. The majority (79.3%) were in the 31–40 years age group, representing active reproductive and parenting years. Nuclear families predominated (69.0%), consistent with contemporary urban Indian family structures.

Notably, 60.7% of mothers had children in the 6–8 years age group, the critical window for early menarche detection.

2.2 Knowledge Levels

Mothers demonstrated exceptionally high knowledge (96.3% mean score), with 58.6% achieving perfect scores. This finding contrasts with several studies from developing countries reporting lower maternal knowledge about puberty [3,4]. The high educational status of participants (58.6% postgraduates) likely contributed to this outcome.

Strengths in knowledge:

- Universal awareness of hormonal causes (100%)
- Complete understanding of maternal guidance role (100%)
- Excellent hygiene practices knowledge (hand washing, pad changing frequency, safe absorbents)

Areas of relative deficiency:

- Consequences of tight/unclean undergarments (86.2% correct)
- Comprehensive education needs for early menarche (96.6% correct, but one participant selected only "menstrual hygiene")

The minor knowledge gaps suggest that while mothers understand basic concepts, nuanced aspects of comprehensive care require reinforcement.

2.3 The Knowledge-Anxiety Paradox

Despite near-universal knowledge, mothers reported **substantial anxiety** across multiple domains. This "knowledge-anxiety paradox" represents the study's most significant finding:

Table

Domain	Knowledge	Anxiety	Gap
Definition of early menarche	93.1% correct	Worry about early menarche: 3.55	High
Emotional consequences known	96.6% correct	Worry about emotional changes: 3.21	High
Hygiene practices known	96.6% correct	Stress about hygiene maintenance: 2.79	Moderate

This paradox suggests that **knowledge alone does not translate to emotional preparedness**. Mothers may intellectually understand early menarche but remain emotionally unprepared for its manifestation in their own children.

Figure 8: Comprehensive Dashboard — Mothers' Knowledge & Anxiety About Early Menarche (n=29)

2.4 Sources of Information

Health personnel (34.5%), family (27.6%), and schools (24.1%) emerged as primary information sources. The diversity of sources indicates good information accessibility for this educated cohort. However, the persistence of anxiety despite multiple information channels suggests that **information quality and emotional support components** may be inadequate.

2.5 Clinical and Public Health Implications

1. **Need for Psychosocial Interventions:** Healthcare providers should address emotional preparedness alongside information provision.
2. **Targeted Counseling:** Mothers of children aged 6–8 years (the highest-risk group in this sample) require anticipatory guidance before puberty onset.
3. **School-Based Programs:** Given schools' role as information sources (24.1%), structured puberty education programs could bridge knowledge-emotion gaps.
4. **Family-Centered Care:** Joint counseling sessions involving mothers and children may reduce maternal anxiety while preparing children.

CONCLUSION

This study reveals a critical disconnect between **cognitive knowledge** and **emotional preparedness** among mothers regarding early menarche. While the study population—predominantly educated, urban mothers—demonstrates excellent knowledge about early menarche definition, causes, consequences, and management, significant anxiety persists across multiple domains. The highest anxiety levels concern the child's emotional well-being and safety during

puberty, areas where maternal emotional investment is greatest.

KEY RECOMMENDATIONS:

1. Integrate emotional preparedness modules into existing puberty education programs
2. Develop anticipatory guidance protocols for mothers of at-risk children (6–8 years)
3. Establish support groups for mothers navigating early puberty
4. Train healthcare providers to address both knowledge and anxiety during consultations

LIMITATIONS

1. Small sample size (n=29) limits generalizability
2. Convenience sampling may introduce selection bias toward more educated, engaged mothers
3. Cross-sectional design precludes causal inferences
4. Single-center/region data may not represent diverse populations
5. Social desirability bias may inflate knowledge scores

FUTURE DIRECTIONS

1. Large-scale multi-center studies with diverse socioeconomic representation
2. Longitudinal designs tracking knowledge and anxiety changes through puberty
3. Intervention studies testing anxiety-reduction strategies
4. Qualitative exploration of the knowledge-anxiety disconnect
5. Development and validation of a standardized "Maternal Puberty Preparedness Scale"

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