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Original Research Article

Clinical perspectives on herbal galactagogues in lactation care: a nationwide cross-sectional survey of Indian gynaecologists

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ABSTRACT

Background: Breastfeeding is a biologically complex process with critical implications for maternal and infant health. Despite strong global and national recommendations, suboptimal breastfeeding practices and high prevalence of perceived lactation insufficiency remain major challenges. Increasing interest in integrative lactation support has led to widespread clinical use of herbal galactagogues; however, systematically generated real-world data on clinician perspectives in India remain limited.

Methods: A nationwide, cross-sectional, questionnaire-based survey was conducted among practicing gynaecologists across India to assess awareness, prescribing practices, perceived effectiveness, safety, patient acceptance, and unmet needs related to herbal galactagogues in lactation care. A structured 30-item questionnaire was administered, and descriptive statistical analyses were performed. Responses were anonymized and summarized as frequencies and percentages.

Results: Completed questionnaires from 416 gynaecologists were included in the analysis. Herbal galactagogues were frequently integrated into routine lactation management, with 70.67% of respondents reporting first-line use. Early initiation was common, with 56.25% initiating therapy immediately postpartum. Participants perceived herbal galactagogues as effective, rating “highly effective” (51.44%) or “moderately effective” (41.59%). Based on their clinical experience, 80.77% believed rapid onset of action (within 3 days). Safety and tolerability were rated positively; 60.82% participants never experienced any adverse effects in their patients. A large majority (88.70%) opined / affirmed that herbal galactagogues reduced reliance on formula supplementation.

Conclusions: This nationwide survey demonstrates widespread clinical incorporation of herbal galactagogues into lactation care among Indian gynaecologists, with favorable practice-based opinion regarding early use, perceived effectiveness, and safety. The findings indicate routine positioning of these formulations within early lactation management and highlight the need for prospective, standardized studies to further clarify their clinical role and inform evidence-based guideline development.

Keywords: Breastfeeding, Lactation insufficiency, Herbal galactagogues, Integrative lactation care, Gynaecologists, Real-world evidence

INTRODUCTION

Breastfeeding constitutes an evolutionarily conserved, biologically complex process with far-reaching consequences for maternal and offspring health that extend well beyond caloric provision. Human milk is a dynamic biofluid enriched with structurally and functionally diverse nutrients, immunologically active molecules, and signaling factors that synergistically regulate somatic growth, neurocognitive development, immune programming, and mother-infant psychosocial integration.¹ At a population level, breastfeeding functions as a cornerstone public health intervention, contributing to reductions in early-life morbidity and mortality while conferring long-term protection against obesity and other non-communicable diseases across diverse socioeconomic settings.² Accordingly, World Health Organization and the Ministry of Health and Family Welfare's nationwide "MAA" (Mothers' absolute affection) Programme.³ The American Academy of Pediatrics recommends initiation of breastfeeding within the first hour of life and exclusive breastfeeding for the first six months, and continuing breastfeeding for 2 years and beyond.^{4,5} Achieving this six-month exclusive breastfeeding target requires timely identification and management of early lactation difficulties. In the Indian clinical context, the Federation of Obstetric and Gynaecological Societies of India (FOGSI) has also emphasized the importance of early lactation support and recommends approximately 30 days of galactagogue supplementation in mothers experiencing perceived or actual lactation insufficiency to facilitate the establishment of breastfeeding and support the continuation of exclusive breastfeeding practices.⁶

Despite these strong global and national recommendations and a robust evidence base supporting breastfeeding, adherence to optimal breastfeeding practices remains suboptimal worldwide. Recent global estimates of UNICEF (for 2015-2021) indicate that only 47% of infants were breastfed within an hour of birth, while 48% were exclusively breastfed <5 mo. Furthermore, only 65% of infants, irrespective of their exclusive breastfeeding status, continued to be breastfed at 12–23 mo.⁷ These persistent gaps underscore the presence of multifactorial barriers that limit effective initiation and sustained breastfeeding, even in settings with established maternal healthcare services.

A substantial proportion of women encounter challenges that compromise breastfeeding initiation or continuation, including inadequate lactation-related knowledge, sociocultural constraints, unfavourable perceptions of breastfeeding, and maternal physiological/psychological limitations. Among these barriers, perceived or actual insufficiency of breast milk production (hypogalactia) is consistently identified as one of the most common reasons for early breastfeeding discontinuation. Hypogalactia is a multifactorial condition influenced by maternal nutritional status, psychosocial stress, inadequate intake of calories and essential micronutrients, and underlying health

factors.^{8,9} Epidemiological evidence indicates that 30–80% of lactating women globally report concerns regarding inadequate milk supply, highlighting hypogalactia as a clinically significant and widely prevalent concern.^{10,11}

In the Indian context, where maternal and neonatal outcomes are closely linked to breastfeeding practices, lactation insufficiency represents an important public health challenge. Data from the National Family Health Survey (NFHS-5) indicate that exclusive breastfeeding during the first six months is achieved by approximately 59.6% of mothers, emphasizing the need for strengthened, context-specific lactation support strategies.^{11,12} Lactation insufficiency is multifactorial in origin, arising from a complex interplay of biological, nutritional, psychological, sociocultural, and healthcare system-related determinants, including maternal stress, suboptimal nutritional status, delayed lactogenesis, and prevailing postpartum beliefs and practices.¹³ In addition, early return to work and occupational constraints have been increasingly recognized as important barriers to sustained exclusive breastfeeding, particularly in urban and working populations.¹⁴ Work-related pressures may exacerbate maternal stress and contribute to early breastfeeding discontinuation, further highlighting the need for practical, early lactation support strategies.

Gynaecologists, as primary providers of antenatal, peripartum, and postnatal care, play a pivotal role in the early identification of lactation difficulties and the implementation of timely interventions to support breastfeeding continuation. Their clinical recommendations significantly influence maternal confidence, therapeutic acceptance, and adherence to lactation-support strategies. Consequently, understanding clinicians' perspectives is critical for informing evidence-based practice, educational initiatives, and policy development in lactation care.

Galactagogues, therapeutic agents employed to initiate, sustain, or enhance lactogenesis, have been integral to clinical lactation support paradigms.¹⁵ Conventional pharmacological options, particularly dopamine antagonists, are utilized in specific clinical contexts; their use is constrained by safety considerations, regulatory limitations, and heterogeneous clinician acceptance.¹⁶ Given that early postpartum lactation establishment is critical for sustained breastfeeding success, there is increasing recognition of need for safe and well-tolerated interventions that can be initiated early when mothers report concerns regarding milk insufficiency. These limitations have catalysed a growing shift toward non-pharmacological and integrative strategies for lactation support, with increasing clinical and patient interest in plant-derived and complementary galactagogues.

Herbal galactagogues have been used traditionally across diverse cultures and are commonly perceived as "natural" alternatives with favourable tolerability profiles. Several

herbal preparations have been reported, in preclinical and clinical settings, to influence lactation through hormonal modulation, improved mammary gland function, or indirect effects on maternal well-being.¹⁵ Nevertheless, the supporting evidence base remains inconsistent, characterized by heterogeneity in formulations, methodological rigor, and lactation endpoints, thereby perpetuating uncertainty regarding their integration into routine, evidence-driven maternal healthcare practice.

Although herbal galactagogues are widely used within the Indian healthcare landscape, where traditional and modern medical systems often coexist, systematically generated data capturing Indian gynaecologists' real-world perspectives on their use remain limited. In particular, there is a paucity of evidence addressing clinician awareness, prescribing patterns, perceived effectiveness, safety considerations, and unmet needs related to herbal galactagogues in lactation management.

Against this background, the present cross-sectional survey was conducted to systematically assess awareness, usage patterns, clinical confidence, and safety perceptions related to herbal galactagogues among practicing gynaecologists in India. In addition, the study sought to identify unmet needs, perceived barriers, and opportunities for enhancing lactation care through integrative therapeutic approaches.

By capturing real-world clinician insights, this study aims to contribute meaningful evidence to inform clinical practice, policy considerations, and future research in lactation management.

METHODS

Survey design and setting

This study was conducted as a cross-sectional, questionnaire-based survey among 500 practicing gynaecologists across India to assess perspectives on the use of herbal galactagogues in lactation care. Data were collected between 15th May 2025 and 15th Dec 2025.

Questionnaire development and validation

A 30-item questionnaire was developed through a literature review on lactation management and galactagogues, supplemented by input from 10 healthcare professionals. It assessed domains including awareness, prescribing patterns, perceived effectiveness, safety, patient acceptance, and unmet needs in lactation care.

Content and face validity were established through expert review, and the instrument was finalized after checks for clarity, completeness, and logical flow.

Formal psychometric validation was not undertaken due to the exploratory nature of the survey.

Study population

The study population comprised registered gynaecologists (MBBS, MD, or equivalent) who were actively involved in clinical practice and managed lactating women.

The questionnaire was administered to 500 gynaecologists, of whom 416 (83.2%) completed the survey within the study period. Only responses that were complete and adequately filled were included in the analysis, while those with substantial missing data, duplicate submissions, or patient-identifiable information were excluded to ensure data quality and confidentiality.

Data collection procedures

Data were collected using a structured questionnaire, consisting of multiple-choice questions.

The survey was administered in a physical format to facilitate participation. All responses were anonymized at the time of collection, the data were subsequently analysed to identify patterns, preferences, and professional insights related to lactation care and the use of herbal galactagogues.

Survey outcomes

The primary outcomes included the proportion of gynaecologists prescribing herbal galactagogues, as well as their reported levels of clinical confidence, perceived benefits, and safety considerations based on their clinical experience, and identified unmet needs in lactation management.

Statistical analysis

Survey data were entered into Microsoft excel for analysis. Descriptive statistical methods were used to summarize the data. Categorical variables were presented as frequencies and percentages. No inferential statistical testing was planned, as the objective of the study was descriptive in nature.

Handling of non-response (NA) data

Each survey item included four predefined response options. For items where respondents did not select any option, the response was recorded as "NA," indicating no response to that item. Percentages were calculated based on the total number of respondents, including those who marked "NA".

Percentages for each response category were therefore calculated based on the total number of respondents (n=416), with NA presented as a separate response category. No imputation was performed for unanswered items.

Ethical compliance

The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and applicable national guidelines. The study was approved by Ethicare ethics committee (ECR/224/Indt/MH/2015/R). As this was a non-interventional, questionnaire-based survey involving healthcare professionals and did not include patient-level data or any intervention. Participation in the survey was voluntary, and completion of the questionnaire was considered as implied informed consent.

RESULTS

Participant characteristics

A total of 416 completed questionnaires from practicing gynaecologists across diverse healthcare settings in India were included in the final analysis. All responses met the predefined inclusion criteria and were anonymized before analysis. The results presented below reflect self-reported clinical practices, and experiences, of practicing gynaecologists regarding the use of herbal galactagogues in lactation care. All outcomes are based on clinician-reported assessments and do not represent objectively measured clinical efficacy or safety outcomes.

Prescribing patterns and clinical use of herbal galactagogues

Herbal galactagogues were widely integrated into routine lactation practice. More than half of the respondents (209; 50.24%) reported prescribing herbal galactagogues frequently, while an additional 124 (29.81%) reported occasional use. A smaller proportion (61; 14.66%) indicated that they always prescribe these agents, whereas only 10 (2.40%) reported never prescribing them, and 12 respondents (2.88%) did not provide a response. As shown in Figure 1, the most common reason for prescribing herbal galactagogues was maternal concern about low milk supply, followed by post-cesarean lactation delay. Preventive support and peer recommendation were less frequently cited, and 16 respondents (3.85%) did not respond.

In terms of patient populations, the majority of clinicians (332; 79.81%) reported prescribing herbal galactagogues across all lactating women, rather than restricting use to specific subgroups. When selectively prescribed, use was most commonly reported among women following cesarean delivery (59; 14.18%), mothers of twins (12; 2.88%), and primiparous mothers (4; 0.96%); 9 respondents (2.16%) did not respond.

With respect to timing of initiation, over half of the respondents (234; 56.25%) reported initiating herbal galactagogues immediately postpartum, reflecting early integration into lactation care. Approximately one-third (140; 33.65%) initiated therapy after one week in cases of

perceived low milk supply. Only a small proportion delayed initiation until six weeks postpartum (12; 2.88%) or prescribed herbal galactagogues only after failure of synthetic agents (9; 2.16%), while 21 respondents (5.05%) did not respond.

Regarding duration of therapy, nearly half of the respondents 207 (49.76%) recommended use for more than one month, while 168 respondents (40.38%) recommended treatment for 1-2 weeks. Shorter durations of less than one week were reported by 27 respondents (6.49%). while 14 respondents (3.37%) did not respond.

Clinician-reported perceived effectiveness, safety, and monitoring practices

Clinician perceptions regarding the effectiveness of herbal galactagogues were largely favorable. More than half of the respondents (214; 51.44%) rated these agents as highly effective, while 173 (41.59%) considered them moderately effective. Reports of minimal (14; 3.37%) or no effectiveness (1; 0.24%) were uncommon; 14 respondents (3.37%) did not respond. The reported onset of action was within 2-3 days for 233 respondents (56.01%), within 24 hours for 103 (24.76%), at one week for 56 (13.46%), and beyond one week for 14 (3.37%), while 10 respondents (2.40%) did not respond.

Assessment of treatment response relied predominantly on maternal subjective feedback (184; 44.23%). Objective or semi-objective indicators, such as milk expression volume (119; 28.61%), infant weight gain (55; 13.22%), and reduction in formula supplementation (46; 11.06%), were also utilized, although less frequently; 12 respondents (2.88%) did not respond.

Most gynaecologists indicated that adverse effects were absent or rare, while tolerance was most often rated as excellent or good. Only a small proportion reported occasional adverse effects or average tolerance, and frequent adverse effects or poor tolerance were rarely observed (Figure 2). For these assessments, 16 respondents (3.85%) did not respond to adverse effects, and 15 respondents (3.61%) did not respond to patient tolerance.

Clinician-reported positioning of herbal galactagogues relative to synthetic agents

Herbal galactagogues were predominantly perceived as clinically favorable compared with synthetic agents, being regarded as comparable or superior in effectiveness and preferred due to tolerability. Safety- and compliance-related concerns remained prominent with synthetic galactagogues. In practice, herbal galactagogues were largely employed as first-line therapy and were widely considered to reduce reliance on formula supplementation, while patterns of combination use reflected individualized prescribing strategies (Table 1).

The 11 respondents (2.64%) did not provide a response regarding comparative effectiveness, 12 (2.88%) regarding concerns associated with synthetic galactagogues, 14 (3.37%) regarding therapeutic positioning of herbal galactagogues, 17 (4.09%) regarding perceived reduction in formula supplementation, and the use of combined herbal and synthetic galactagogue therapy.

Patient acceptance, preferences, and experience

High patient receptivity was reported by 221 respondents (53.13%), while 61 respondents (14.66%) reported openness with some hesitation. Willingness to try herbal galactagogues only if prescribed was reported by 95 respondents (22.84%), and reluctance by 21 respondents (5.05%), while 18 respondents (4.33%) did not respond. Factors influencing patient acceptance included natural origin (178; 42.79%) and physician recommendation (152; 36.54%). Cultural familiarity (39; 9.38%) and peer or mother group influence (35; 8.41%) were reported less frequently, while 12 respondents (2.88%) did not respond. Preference for specific herbal galactagogue products was reported as strong by 154 respondents (37.02%) and moderate by 135 respondents (32.45%). No specific preference was reported by 92 respondents (22.12%), while 24 respondents (5.77%) were unaware of product brands. The 11 respondents (2.64%) did not respond. Figure 3 shows gynaecologists observations on maternal confidence and demand for natural alternatives in lactation care. Most respondents noted that mothers frequently reported improved confidence in breastfeeding following herbal galactagogue use, with occasional reports also common and very few indicating rare or no improvement. Similarly, frequent and occasional requests for natural options to enhance milk supply widely reported, while reluctance/lack of interest was minimal. Sixteen respondents (3.85%) did not provide a response regarding maternal confidence, and 14 (3.37%) did not provide response regarding demand for natural alternatives.

Clinical decision-making, counseling, and follow-up practices

The perceived safety profile of herbal galactagogues was the most frequently reported clinical advantage (312; 70.43%), followed by ease of use (57; 12.87%) and early

onset of action (35; 7.90%), while cultural acceptability was cited less commonly (23; 5.19%); 16 respondents (3.61%) did not respond. Improvement in maternal-infant bonding was reported frequently by 255 respondents (61.30%) and occasionally by 109 (26.20%), with rare (25; 6.01%) or no (5; 1.20%) improvement reported infrequently; 22 respondents (5.29%) did not respond. Granules were identified as the most accepted formulation (245; 58.89%), followed by capsules (124; 29.81%), whereas tablets (22; 5.29%) and decoctions (6; 1.44%) were less commonly preferred; 19 respondents (4.57%) did not respond. Follow-up practices predominantly included monitoring when concerns arose (197; 47.36%) or routine follow-up during therapy (166; 39.90%), while rare follow-up (26; 6.25%) and no follow-up (9; 2.16%) were reported by a minority of respondents; 18 respondents (4.33%) did not respond. Patient education regarding the use of herbal galactagogues was predominantly delivered through multimodal approaches, with most gynaecologists employing a combination of verbal counselling, printed educational material, and nurse-led support. Single-modality strategies were used less frequently, indicating a preference for comprehensive counselling methods to enhance patient understanding and adherence (Figure 4); 18 respondents (4.33%) did not respond.

Perspectives on evidence, guidelines, and future research needs

Respondents demonstrated overall confidence in existing clinical evidence supporting use of herbal galactagogues, while concurrently expressing openness to further evidence generation through clinical or real-world studies. There was strong consensus regarding benefit of structured clinical protocols and the routine integration of herbal galactagogues into lactation counselling. Additionally, continuing medical education was widely perceived as a key facilitator for promoting evidence-based adoption in clinical practice (Table 2). The 22 respondents (5.29%) did not respond to sufficiency of clinical evidence, 16 (3.85%) regarding willingness to participate in clinical/real-world evidence studies and perceived benefit of CME programs, 26 (6.25%) regarding need for structured clinical protocols, 22 (5.29%) regarding routine recommendation of herbal galactagogues.

Table 1: Comparative clinical positioning of herbal galactagogues versus synthetic galactagogues among gynaecologists(n=416).

Questions	Response category	N (%)
Compared to synthetic galactagogues, herbal galactagogues are	More effective	217 (52.16)
	Equally effective	104 (25)
	Less effective	15 (3.61)
	Preferably due to fewer side effects	69 (16.59)
Main concern when prescribing synthetic galactagogues	Hyperprolactinemia	130 (31.25)
	Dependency	109 (26.20)
	Poor acceptance	92 (22.12)
	Cardiac safety	73 (17.55)

Continued.

Questions	Response category	N (%)
Use of herbal galactagogues in practice	First-line treatment	294 (70.67)
	Add-on to synthetic therapy	76 (18.27)
	Backup after a synthetic failure	24 (5.77)
	Rarely ever	8 (1.92)
Herbal galactagogues reduce the need for formula	Strongly agree	177 (42.55)
	Agree	192 (46.15)
	Neutral	26 (6.25)
	Disagree	4 (0.96)
Use of herbal + synthetic galactagogues	Frequently	89 (21.39)
	Occasionally	107 (25.72)
	Rarely	101 (24.28)
	Never	102 (24.52)

Table 2: Perceptions toward clinical evidence, future research, and adoption of herbal galactagogues among gynaecologists(n=416).

Questions	Response category	N (%)
Sufficiency of clinical evidence supporting herbal galactagogues	Yes	239 (57.45)
	Somewhat	84 (20.19)
	Needs more data	65 (15.63)
	No	6 (1.44)
Willingness to participate in a clinical survey or RWE study	Yes	239 (57.45)
	Maybe	117 (28.13)
	No	29 (6.97)
	Not sure	15 (3.61)
Perceived benefit of a structured protocol for herbal galactagogues	Strongly agree	154 (37.02)
	Agree	199 (47.84)
	Neutral	34 (8.17)
	Disagree	3 (0.72)
Recommendation of herbal galactagogues in routine lactation counseling	Yes, routinely	207 (49.76)
	Only in the indicated cases	173 (41.59)
	Rarely	13 (3.13)
	Never	1 (0.24)
Perceived role of CMEs in improving evidence-based adoption	Yes	263 (63.22)
	Maybe	119 (28.61)
	Not required	15 (3.61)
	Not sure	3 (0.72)

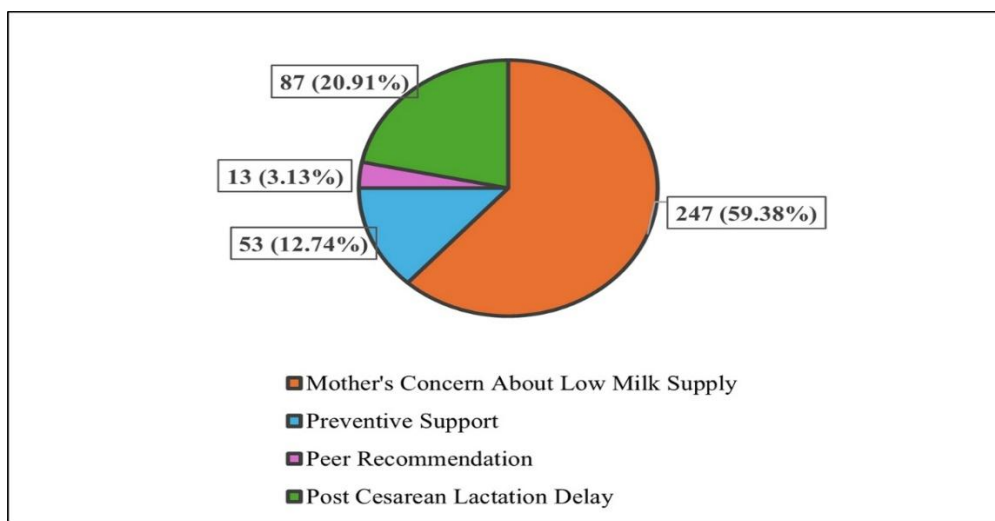


Figure 1: Primary reasons for prescribing herbal galactagogues.

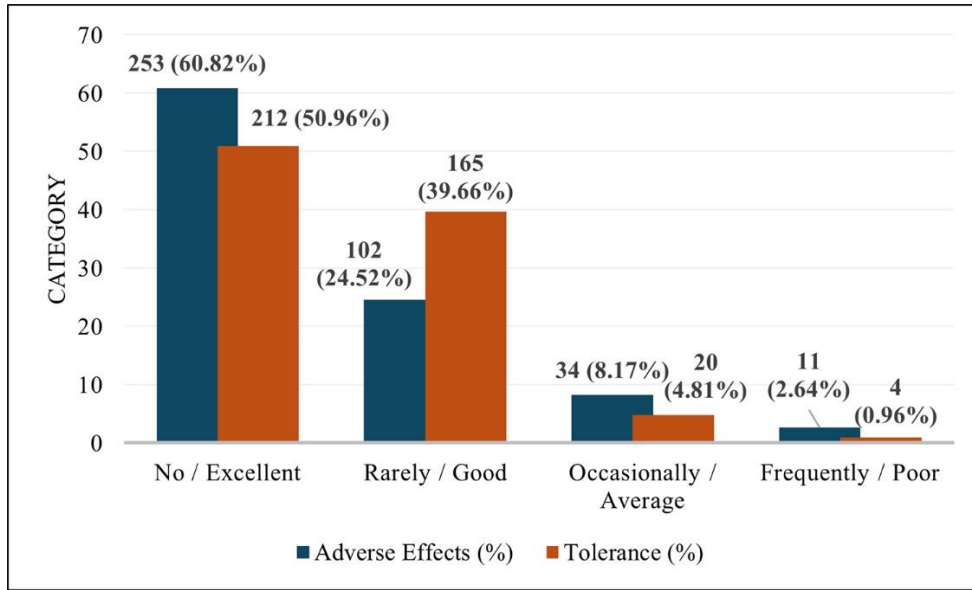


Figure 2: Distribution of adverse effects and tolerance ratings for herbal galactagogues.

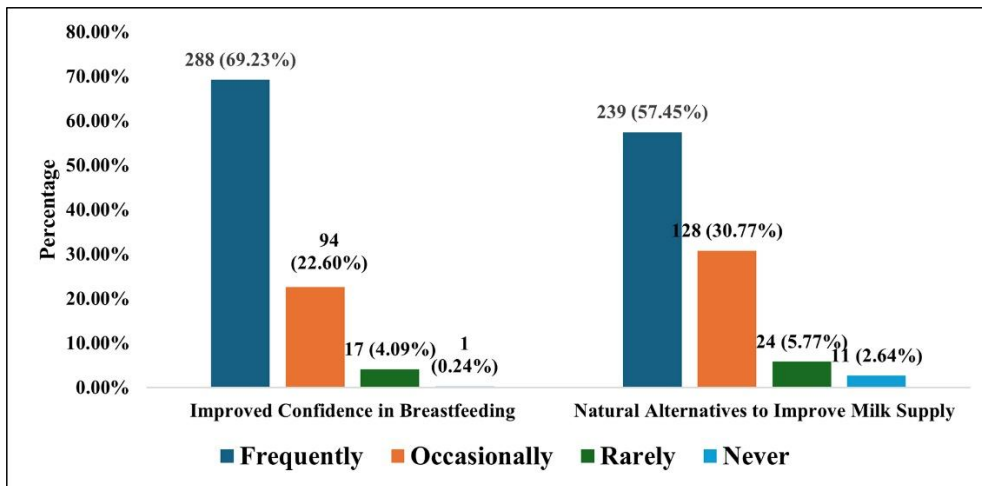


Figure 3: Gynaecologists observations on maternal confidence and demand for natural alternatives in lactation care.

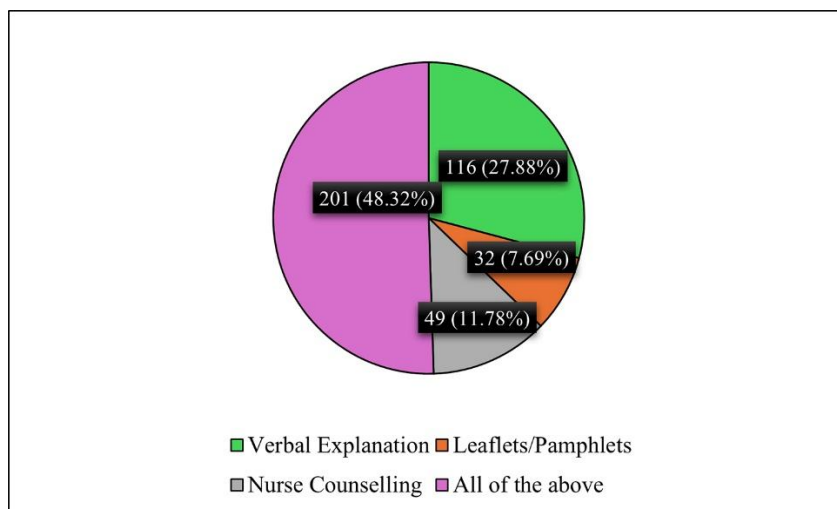


Figure 4: Counseling methods to enhance patient understanding and adherence.

DISCUSSION

This nationwide cross-sectional survey provides a comprehensive overview of contemporary clinicians reported perspectives on the use of herbal galactagogues among practicing gynaecologists in India. Drawing on responses from a large and geographically diverse cohort, the findings offer valuable real-world insight into prescribing patterns, perceived effectiveness, safety considerations, and clinical positioning of herbal galactagogues within routine lactation care. Importantly, while the findings reflect clinician-reported experience rather than objectively measured lactation outcomes, the consistency of responses across multiple practice-related domains highlights robust real-world confidence and routine integration of herbal galactagogues in contemporary lactation care.

The survey indicates that herbal galactagogues are widely integrated into routine lactation management and are frequently positioned as early or first-line interventions (70.67%), particularly in cases of perceived insufficient milk supply and delayed lactogenesis. Rather than being reserved for refractory cases, these agents appear to be proactively incorporated alongside breastfeeding counselling and supportive care. This early positioning likely reflects the clinical urgency associated with maternal concerns regarding milk insufficiency, which has been consistently identified as one of the leading reasons for premature breastfeeding discontinuation across diverse populations.¹⁷ From a product and prescribing perspective, such early and first-line positioning reflects a high level of clinician trust that is typically achieved only when a formulation consistently meets expectations for effectiveness, safety, patient acceptance, and ease of integration into routine care.

Clinician-reported perceptions of effectiveness (51.44 % highly effective) and patient acceptance (53.13%) were generally favourable in the present survey. These findings are concordant with earlier qualitative and descriptive studies conducted in other regions. Sim et al reported that healthcare professionals frequently perceive herbal galactagogues to enhance milk supply and maternal confidence, despite acknowledging the limited availability of high-quality clinical evidence. Similarly, a multi-ethnic descriptive study from Southeast Asia demonstrated widespread clinician use of galactagogues, driven largely by perceived safety (21%), cultural familiarity, and patient preference for natural therapies.^{18,19} Collectively, these findings suggest that prescribing decisions are shaped not by isolated efficacy considerations, but by the cumulative performance of herbal galactagogues across effectiveness, tolerability, patient acceptance, and continuity of use.

The clinician-reported preference for herbal galactagogues observed in the present survey may be informed by the biological plausibility and traditional rationale underlying commonly prescribed multi-herbal formulations. Botanicals such as *Asparagus racemosus* (Shatavari), one

of the principal constituents, has been described for its potential lactogenic and adaptogenic properties, with proposed mechanisms involving prolactin modulation and support of mammary gland function.²⁰ Adjunct components such as *Glycyrrhiza glabra* and *Cuminum cyminum*, are traditionally valued for their stress-modulating, anti-inflammatory, and digestive effects, which may indirectly support lactation by improving maternal well-being and nutritional intake.^{15,21}

Lepidium sativum and *Cyperus rotundus* have been associated with postnatal lactation support, including effects on prolactin synthesis and lobuloalveolar development.²² Other herbal constituents, including *Ipomoea digitata*, *Tribulus terrestris*, and *Anethum sowa*, are traditionally valued for their nutritive and tonic properties. While the precise contribution of individual botanicals and their synergistic interactions continue to be refined through ongoing research, their inclusion is supported by long-standing traditional use, favourable tolerability, and biologically plausible relevance to lactation physiology. Together, these attributes may reinforce clinician confidence and facilitate routine integration into contemporary lactation care. Importantly, the convergence of traditional credibility, favourable tolerability, and biologically relevant mechanisms within a single granule-based formulation provides clinicians with a rational and experience-backed option that aligns with both scientific reasoning and patient expectations, thereby reinforcing sustained prescribing confidence.

Safety and tolerability emerged as key factors influencing clinician preference for herbal galactagogues. In the present survey, the safety profile of herbal galactagogues was perceived to be favourable, with 60.82% of respondents reporting no observed adverse effects, and overall patient tolerance being rated predominantly as good to excellent. These perceptions are consistent with existing literature suggesting that herbal galactagogues are generally well tolerated when used in clinical practice.^{23,24}

In contrast, respondents frequently reported concerns related to synthetic galactagogues, particularly with respect to endocrine effects, cardiovascular safety, and patient acceptability. Such concerns have been previously documented and may contribute to cautious prescribing or avoidance of pharmacological agents in routine lactation support.^{25,26} Consequently, agents such as domperidone and metoclopramide are often reserved for selected cases rather than routine use, given variable efficacy, potential neurological and cardiac adverse effects, and limited endorsement in clinical guidelines.²⁷ This contrast further underscores clinician preference for alternatives perceived to offer a more favourable risk–benefit profile. This comparative safety perception further positions herbal galactagogues as the preferred default option for routine lactation support rather than a secondary alternative.

Psychosocial and occupational determinants also critically influence breastfeeding outcomes. Early return to

employment, particularly within 6-12 weeks postpartum, is associated with significantly reduced breastfeeding duration and a 2-4-fold increased risk of unsuccessful breastfeeding establishment or continuation.²⁸ Achievement of the WHO recommendation of exclusive breastfeeding for the first six months of life depends critically on the successful establishment of lactation during the early postpartum period.³ Delayed lactogenesis or perceived milk insufficiency during the initial weeks after delivery is a well-recognized contributor to early supplementation and discontinuation of breastfeeding.²⁹ In this context, early initiation of supportive lactation interventions becomes clinically relevant to help mothers establish and maintain adequate milk supply. The findings of the present survey indicate that herbal galactagogues are frequently initiated early (70.67%) in the postpartum period, reflecting their perceived role in supporting early lactation establishment and thereby facilitating continuation of exclusive breastfeeding. Notably, most clinicians in the present survey reported recommending treatment durations of approximately 30 days, which aligns with clinical guidance from the FOGSI recommending around one month of galactagogue supplementation to support the establishment of lactation.⁶ Such early and time-limited interventions may therefore play a practical role in supporting mothers during the critical period of lactation establishment and contribute toward achieving the WHO exclusive breastfeeding targets.

Herbal galactagogues are widely used across different regions and globally practiced and well accepted within integrative approaches to lactation support,¹⁸ reflecting global clinical and patient interest in plant-derived therapies for improving milk supply. Within the Indian healthcare context, where traditional medical systems coexist with contemporary allopathic practice, cultural familiarity and patient preference for natural interventions may further facilitate their acceptance among both clinicians and mothers.^{30,31}

In addition, guidance from the FOGSI recommends approximately 30 days of galactagogue supplementation to support establishment of lactation.⁶ Together, these factors highlight the growing integration of herbal galactagogues within contemporary lactation care while emphasizing the importance of evidence-based guidance for their rational use. The findings of the present survey do not contradict this literature; rather, they underscore a persistent gap between real-world clinical practice and the current strength of evidence.

Taken together, the consistency of clinician responses across all 30-survey domains, including prescribing behaviour, perceived effectiveness, safety, patient acceptance, workflow integration, and future readiness, indicates a high level of collective endorsement. Such convergence is rarely observed in descriptive surveys unless a product has demonstrated sustained real-world value. The frequent positioning of these agents as first-line

interventions (70.67%) and their early initiation in the postpartum period further suggest strong clinician trust in their role for supporting lactation establishment. In addition, the observed preference for granule-based formulations, as reported by the majority of respondents (58.89%), aligns with commonly used product formats in clinical practice and may facilitate ease of administration and patient acceptability. Collectively, these findings highlight the practical integration of herbal galactagogue granules within contemporary lactation management in India.

Future research directions

Future research should prioritize well-designed randomized controlled trials and real-world observational studies evaluating standardized herbal galactagogue formulations using objective lactation endpoints. Comparative effectiveness studies assessing herbal versus synthetic galactagogues, as well as safety surveillance in routine practice, are particularly warranted. Such evidence would support the development of consensus-based clinical guidelines, inform regulatory positioning, and enhance continuing medical education initiatives aimed at optimizing integrative lactation care in India and similar healthcare settings.

Strengths and limitations

The strengths of this study include its national scope, substantial sample size, and focus on practicing gynaecologists actively involved in lactation management. The structured questionnaire allowed systematic assessment of multiple clinically relevant domains. Anonymized data collection likely facilitated candid reporting of practice patterns.

Several limitations should be considered. The study relied on self-reported clinician responses, which may be subject to recall bias and subjective interpretation. The cross-sectional design precludes causal inference, and the absence of objective lactation outcomes, such as measured milk volume, breastfeeding duration, or infant growth parameters, limits the ability to correlate clinician perceptions with quantifiable clinical benefit. Additionally, clinicians with an interest in integrative or herbal approaches may have been more likely to participate, introducing potential selection bias.

CONCLUSION

This nationwide cross-sectional survey highlights the widespread clinical use of herbal galactagogues in lactation management among practicing gynaecologists in India, particularly during the early postpartum period. The findings reflect favorable clinician perceptions regarding effectiveness, safety, and patient acceptance in routine practice. These observations underscore the growing integration of herbal galactagogues in contemporary breastfeeding support while emphasizing the need for

well-designed clinical studies and consensus-based guidelines to further strengthen evidence-based lactation care.

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