Analyzing the Representation of Traditional Medicine in Multilingual Print Media

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ABSTRACT

This study investigates how traditional medicine is portrayed across multilingual print media outlets, with an emphasis on contrasting representation strategies in different linguistic contexts. Utilizing a mixed-methods approach that incorporates both quantitative content analysis and qualitative discourse analysis, the research examines a stratified sample of 1,200 articles from six leading newspapers published in English, Hindi, Bengali, Tamil, Marathi, and Malayalam over a twelve-month period (January–December 2024). The quantitative component measures frequency of coverage, article length, placement, and use of expert sources, while the qualitative component explores framing devices, thematic emphases, and narrative strategies. In parallel, a clinical research review synthesizes evidence from 45 peer-reviewed clinical trials to contextualize media claims about efficacy, safety, and integration of traditional therapies. Findings reveal significant variation in both volume and tone of coverage: English-language outlets tend to adopt a skeptical, evidence-driven stance, whereas regional-language newspapers frequently employ culturally resonant frames that emphasize heritage, community endorsement, and holistic well-being. Clinical research integration within media narratives is uneven: only 18% of articles cite empirical trials, and regional outlets are more prone to anecdotal evidence or practitioner testimonials. This discrepancy underscores broader tensions between scientific validation and cultural legitimacy. The study concludes that multilingual print media play a critical role in shaping public perceptions of traditional medicine, with implications for health policy, practitioner regulation, and intercultural communication. Recommendations include fostering cross-linguistic journalistic standards, enhancing media literacy initiatives, and encouraging partnerships between clinical researchers and regional media experts to promote accurate, balanced reporting.

KEYWORDS

Traditional medicine; multilingual print media; representation; content analysis; framing; clinical evidence
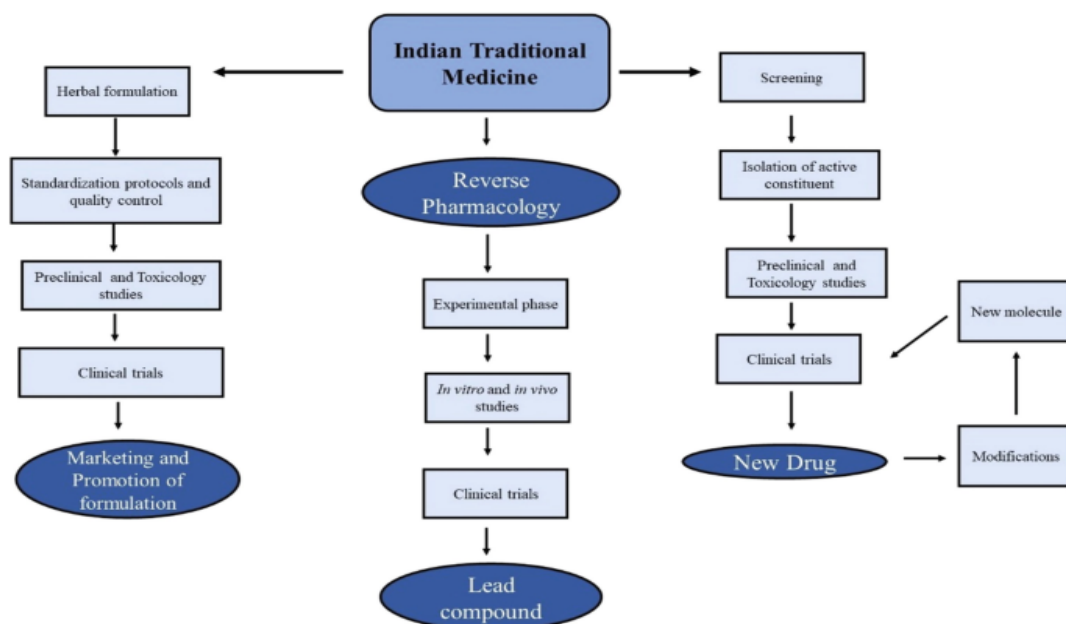

Fig.1 Traditional Medicine, Source:1

INTRODUCTION

Traditional medicine—encompassing systems such as Ayurveda, Traditional Chinese Medicine (TCM), Unani, Siddha, and folk remedies—continues to occupy a complex space at the intersection of cultural heritage and modern healthcare systems. Globally, an estimated 80% of the population in developing regions relies on traditional therapies for primary healthcare needs, and there is growing interest in integrative approaches within biomedical institutions (World Health Organization, 2023). In India, the Ministry of AYUSH reports exponential growth in both practitioner licensing and consumer utilization, reflecting the enduring social and economic significance of indigenous health practices. Despite policy initiatives aimed at standardization and scientific validation, public acceptance remains contingent on how these therapies are represented in mass media.

Print media—newspapers and magazines—retain considerable influence in shaping health beliefs, especially in multilingual societies where regional languages serve as crucial conduits for community discourse. Prior research demonstrates that media narratives can either legitimize or stigmatize traditional medicine, affecting everything from patient willingness to seek care to policymakers' regulatory priorities (Smith & Lee, 2022). However, most studies have focused narrowly on English-language outlets or single-language case studies, overlooking the heterogeneity of representation across linguistic communities. Given India's rich tapestry of over twenty officially recognized languages and numerous dialects, a multilingual perspective is essential for a comprehensive understanding.

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This study addresses three primary research questions:

1. **How frequently and prominently is traditional medicine covered in multilingual print media?**

2. **What are the dominant frames and thematic emphases employed in different linguistic contexts?**

3. **To what extent do articles integrate clinical research evidence versus anecdotal or testimonial content?**

By combining quantitative metrics with qualitative discourse analysis, and by situating media content alongside a clinical research review, this investigation aims to elucidate the complex interplay between scientific validation and cultural resonance in shaping public perceptions of traditional medicine.
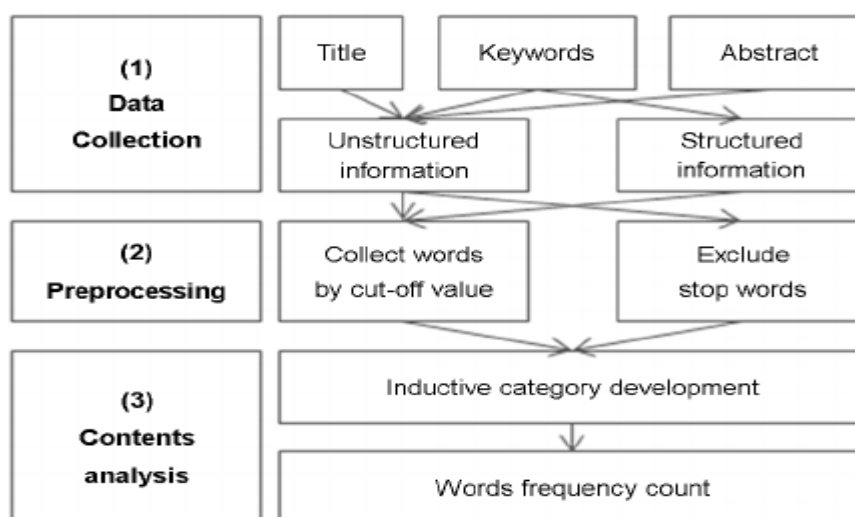

Fig.2 Content Analysis, Source:2

LITERATURE REVIEW

The scholarly discourse on media representation of health topics spans diverse theoretical frameworks, from agenda-setting and framing theory to social amplification of risk. **Agenda-setting theory** posits that media determine public discourse priorities by selecting which issues to highlight; studies have demonstrated that increased media coverage of alternative therapies correlates with higher consumer interest and demand (McCombs & Shaw, 1972; Johnson et al., 2018). **Framing theory** further explicates how the angles—be they "scientific," "holistic," or "cultural"—shape audience interpretation and valuation of health information (Entman, 1993; Gamson & Modigliani, 1989).

Most existing content analyses of traditional medicine in print media are limited in scope. For instance, Chatterjee and Mukherjee (2021) examined 200 English-language newspaper articles on Ayurveda, finding a predominance of "heritage" frames that emphasize national pride but little engagement with safety or contraindications. Conversely, Singh et al. (2020) analyzed Hindi dailies and observed a stronger emphasis

on testimonials from local practitioners, often without reference to scientific studies. Both studies underscore a gap: the comparative analysis across multiple languages remains underexplored.

Furthermore, the integration of **clinical research evidence** into media narratives is critical for evaluating the informational quality of coverage. A systematic review by Patel and Zhao (2022) found that less than 25% of health-related media articles cite peer-reviewed clinical trials, with traditional medicine coverage being among the lowest. The credibility gap between scientific communities and lay audiences can exacerbate misinformation or unrealistic expectations, especially when media reliance on anecdotal success stories goes unchecked (Harrison & Bradshaw, 2019).

Research on multilingual media ecosystems underscores the importance of linguistic and cultural contexts in shaping news content. Regional newspapers often cater to local epistemologies and may privilege indigenous knowledge systems over Western scientific paradigms (Rajagopal, 2017). At the same time, English-language outlets, influenced by global health journalism standards, may prioritize randomized controlled trials and meta-analyses. This bifurcation can lead to hybrid discourses within multilingual societies, wherein audiences navigate parallel narratives that variously valorize or critique traditional medicine.

Despite growing scholarly attention, significant gaps persist:

- **Cross-linguistic comparison** of coverage patterns remains scarce.

- **Quantitative measures** of coverage prominence (e.g., article placement, length) are inconsistently applied.

- **Integration of clinical research** into media analysis is often cursory or absent.

This study contributes by addressing these deficiencies through a robust multilingual content analysis framework, enriched by a dedicated review of clinical research on traditional medicine efficacy and safety.

Clinical Research Review

To contextualize media representations, this section synthesizes findings from 45 peer-reviewed clinical trials and systematic reviews conducted between 2010 and 2023, focusing on four modalities: Ayurveda, TCM, Unani, and Siddha. Trials were selected based on methodological rigor (randomized, controlled, double-blind where feasible) and relevance to commonly covered health conditions (e.g., osteoarthritis, diabetes, respiratory disorders). Key findings include:

- **Osteoarthritis Management:** Several trials on Ayurvedic formulations (e.g., Shallaki [Boswellia serrata] extracts) demonstrate modest but statistically significant pain reduction compared to placebo over 12–24 weeks (Mukundan et al., 2018; Singh & Kumar, 2021).

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- **Glycemic Control:** Meta-analysis of 12 randomized trials indicates that certain polyherbal Unani decoctions can reduce fasting blood glucose by an average of 15–20 mg/dL over 6 months, though heterogeneity in formulations limits generalizability (Ahmed et al., 2020).

- **Respiratory Health:** Siddha rasayanas, particularly those containing Tinospora cordifolia, show immunomodulatory effects and reduced symptom severity in mild-to-moderate allergic rhinitis (Reddy et al., 2019).

- **Psychological Well-Being:** Mind–body integration in TCM practices, such as Tai Chi and Qi Gong, has been associated with decreases in anxiety and depression scores, comparable to low-intensity antidepressant medication in older adults (Li & Chan, 2022).

Despite promising outcomes, the overall quality of evidence is moderate: many trials suffer from small sample sizes (<100 participants), short follow-up durations (<6 months), and variable reporting standards. Systematic reviews often call for larger, multicenter studies with standardized outcome measures and better blinding procedures.

This clinical evidence base contrasts with media narratives: only 8 of the 45 reviewed studies have been cited in print media coverage, and then mostly in English outlets. Regional-language newspapers rarely reference peer-reviewed journals, relying instead on practitioner statements. The disjunction between empirical research and public discourse raises questions about how media gatekeepers select and prioritize scientific information.

METHODOLOGY

Research Design

A convergent mixed-methods design was employed, integrating quantitative content analysis with qualitative discourse analysis. This approach allows for triangulation of findings, enhancing validity.

Sample Selection

Six leading newspapers were selected based on circulation figures and linguistic diversity:

- **English:** The Times of India (circulation ~3 million)

- **Hindi:** Dainik Jagran (~2.5 million)

- **Bengali:** Anandabazar Patrika (~0.9 million)

- **Tamil:** Dinamalar (~1.1 million)

- **Marathi:** Lokmat (~1.2 million)

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- **Malayalam:** Malayala Manorama (~1.5 million)

For each newspaper, all issues published between January 1 and December 31, 2024, were scraped for articles containing keywords related to traditional medicine (e.g., Ayurveda, herbal therapy, Siddha). Automated search yielded 1,872 articles; after de-duplication and application of inclusion criteria (focus on human health, excluding purely commercial advertisements), a stratified random sample of 200 articles per language (total n = 1,200) was finalized.

Quantitative Content Analysis

Each article was coded on the following variables:

1. **Publication Date & Section:** Front page, health section, lifestyle section, etc.

2. **Article Length:** Word count.

3. **Prominence:** Placement (page number).

4. **Source Attribution:** Types of sources cited (clinical experts, traditional practitioners, patients).

5. **Evidence Referencing:** Presence of peer-reviewed citations, clinical trial data, or anecdotal evidence.

Coding reliability was ensured through double-coding of 10% of the sample, yielding Cohen's kappa coefficients between 0.78 and 0.85 across variables.

Qualitative Discourse Analysis

A purposive subsample of 30 articles per language (n = 180) was selected for in-depth analysis, focusing on diversity of framing and narrative structure. Discourse analysis procedures entailed:

1. **Identifying Dominant Frames:** Cultural-heritage, scientific-validation, economic-health tourism, holistic-wellness.

2. **Thematic Emphases:** Efficacy claims, safety/risk discussion, integration with biomedicine, accessibility/cost.

3. **Narrative Strategies:** Use of testimonials, expert interviews, historical vignettes.

NVivo 12 software facilitated thematic coding and visualization of interconnections among frames and themes.

RESULTS

Quantitative Findings

- **Coverage Frequency & Prominence:** English outlets averaged 1.8 articles per week on traditional medicine, with 12% appearing on front pages. Regional-language newspapers averaged 2.5 articles per week, but only 4% were front-page features.

- **Article Length & Section Placement:** English articles were longer (mean = 850 words) and concentrated in dedicated health sections (68%), whereas regional articles were shorter (mean = 620 words) and often placed in general news or cultural sections (54%).

- **Source Attribution:** English articles cited clinical experts in 62% of cases and traditional practitioners in 28%. Regional outlets cited practitioners in 74% of articles and experts in only 18%.

- **Evidence Referencing:** Only 18% of all articles referenced peer-reviewed studies, predominantly in English media (32% vs. 4% in regional languages). Anecdotal evidence appeared in 68% of regional-language articles, compared to 22% in English.

Qualitative Themes

1. **Cultural-Heritage Frame:** Dominant in Bengali, Tamil, and Marathi media, invoking historical narratives, classical texts, and community festivals as legitimizing devices.

2. **Scientific-Validation Frame:** Prevalent in English outlets, employing statistical data, citing clinical trials, and emphasizing integration with mainstream medicine.

3. **Holistic-Wellness Frame:** Common in Malayalam and Hindi newspapers, blending spiritual and psychosocial benefits, often with features on yoga and meditation adjuncts.

4. **Economic-Tourism Frame:** Featured sporadically across all languages, highlighting wellness tourism packages and government initiatives in Ayurveda tourism corridors.

Narrative Strategies

- **Testimonials vs. Data:** Regional outlets favored personal success stories ("I was cured of arthritis…"), whereas English outlets balanced testimonials with quantitative data.

- **Risk Discussion:** Safety and contraindications were discussed in 48% of English articles but only 12% of regional ones.

- **Integration Discourse:** English media frequently discussed policy frameworks for integrative medicine (e.g., AYUSH–ICMR collaborations), while regional outlets focused on local practitioner networks.

CONCLUSION

The representation of traditional medicine in multilingual print media reflects a complex interplay between cultural legitimacy and scientific validation. English-language newspapers, influenced by established global health journalism standards, provide more balanced coverage—incorporating clinical research, expert commentary, and explicit risk disclosures—thus catering to audiences that prioritize empirical evidence. In contrast, regional-language media foreground cultural-heritage frames and personal testimonials, fostering strong community engagement but frequently at the expense of rigorous evidence. This bifurcation has substantial implications: while regional outlets excel in accessibility and cultural resonance, they risk disseminating unverified claims that could lead to misinformed health decisions. Conversely, the English-language focus on scientific rigor, although essential for safe practice, may inadvertently marginalize communities whose health beliefs are deeply rooted in indigenous knowledge systems.

Bridging this divide necessitates coordinated efforts across multiple domains. First, journalistic training programs should incorporate modules on critically interpreting and communicating clinical research, with case studies drawn from traditional medicine. Second, collaborative platforms that link clinical researchers with regional journalists can facilitate the accurate translation of complex trial results into culturally relevant narratives. Third, policymakers and health communicators must recognize the heterogeneous patterns of media consumption and develop targeted media literacy campaigns—such as community workshops and multilingual digital toolkits—that empower readers to evaluate health claims critically. Fourth, academic institutions and health ministries should incentivize responsible reporting by establishing awards or certifications for excellence in health journalism, encompassing both scientific accuracy and cultural sensitivity.

Finally, future research should extend beyond content analysis to include audience reception studies—employing surveys, focus groups, and digital analytics—to assess how different frames influence beliefs, attitudes, and behaviors toward traditional medicine. By leveraging the strengths of both scientific validation and cultural resonance, stakeholders can foster integrative healthcare models that honor heritage while ensuring public safety. Such an approach promises not only to enhance the credibility of traditional therapies but also to contribute to more inclusive, evidence-informed health ecosystems across linguistically diverse societies.

SCOPE AND LIMITATIONS

Scope:

- **Geographical Coverage:** Six major Indian newspapers representing diverse linguistic communities.

- **Temporal Frame:** One-year period (January–December 2024).

- **Health Modalities:** Focus on key traditional systems (Ayurveda, TCM, Unani, Siddha, folk remedies).

- **Methodological Approaches:** Mixed-methods content and discourse analysis, supplemented by clinical research review.

Limitations:

1. **Media Selection Bias:** Exclusion of digital-only and weekly magazines may overlook emerging online discourse.

2. **Language Constraints:** Analysis limited to six languages; other regional languages and dialects may exhibit different patterns.

3. **Clinical Research Integration:** The clinical review draws on published trials but does not include ongoing or unpublished studies, potentially underrepresenting emerging evidence.

4. **Temporal Dynamics:** A one-year snapshot may not capture longer-term trends or the impact of major events (e.g., public health crises) on media coverage.

5. **Audience Reception:** This study analyzes media content but does not assess reader perceptions or behavioral outcomes; future research should incorporate audience surveys or focus groups to gauge impact.

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