

# Comparative Study of Health Awareness Podcasts in Hindi, Bengali, and Telugu

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**ABSTRACT**— The rapid growth of mobile internet access and on-demand audio has positioned podcasts as a promising medium for public health communication in India. This study offers a comparative analysis of health awareness podcasts in three widely spoken Indian languages—Hindi, Bengali, and Telugu—focusing on content quality, cultural localization, credibility, accessibility, and audience engagement. Drawing on a purposive sample of 45 podcast series (15 per language) and 450 episodes published within a recent 12-month window, we employed a mixed-methods approach blending quantitative content analysis with qualitative thematic coding. We developed and applied five evaluation constructs—Health Content Accuracy Index (HCAI), Communication Quality Index (CQI), Cultural Localization Score (CLS), Accessibility & Inclusivity Score (AIS), and Engagement Proxy (EP)—and assessed production features (audio clarity, episode structure, and release cadence) alongside ethical and transparency practices (source citation, conflict disclosures, and calls to action). Findings indicate substantial common ground across languages in prioritizing non-communicable diseases (diabetes, hypertension), mental health, nutrition, and maternal-child health. However, significant differences emerged in narrative style and localization: Hindi shows more frequently used code-switching (Hinglish) and celebrity/expert anchors to build trust; Bengali podcasts leveraged proverbs, local idioms, and community narratives to reduce stigma around

women's health and mental health; Telugu programs frequently referenced cinema, workplace routines, and regional dietary patterns to anchor lifestyle guidance. Hindi podcasts had the highest average HCAI and CQI scores, reflecting stronger evidence citation and structured explanations, while Bengali shows achieved the highest CLS and AIS through careful use of local registers and more frequent transcripts or show notes. Telugu podcasts demonstrated comparatively strong EP values, aided by dynamic storytelling and relatable calls to action. Across languages, gaps remained in disaggregated risk communication (age, gender, disability), explicit sourcing, and standardized health literacy framing. We propose a practical rubric for multilingual public-health podcasters and outline recommendations for ministries, NGOs, and platforms to enhance accuracy, inclusivity, and scale.

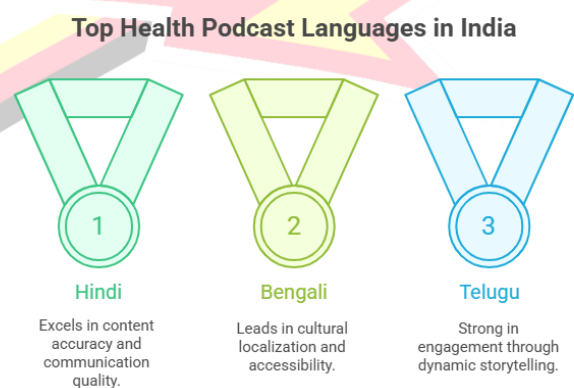


Figure-1. Top Health Podcast Languages in India

## KEYWORDS

**Health Communication, Podcasts, Hindi, Bengali, Telugu, Public Health, Digital Health Literacy, Cultural Localization, India**

## INTRODUCTION

Podcasts—downloadable, serialized audio programs—have evolved from niche entertainment to influential public information channels. Their low production cost, portability, and intimate, conversational tone make them a natural fit for health awareness campaigns, especially when audiences multitask (commuting, household work) or have intermittent connectivity. In the Indian context, the medium's promise is amplified by wide smartphone penetration and the linguistic diversity of audiences who often prefer content in their first language over English for topics that feel personal, such as health behaviors, symptoms, and care-seeking.

practices (e.g., code-switching, idioms, local dietary references) could shape perceived trust and real-world utility.

Hindi, Bengali, and Telugu represent three major linguistic spheres with distinct media traditions and cultural repertoires. Hindi programming often mixes Hindi and English, reflecting a broad, pan-Indian audience and dense urban listenership. Bengali media has a long tradition of literary narration and community debate, which may translate into reflective, stigma-reducing health conversations. Telugu content often draws on cinema and workplace vernacular, offering relatable narratives for lifestyle and occupational health. Understanding whether and how these tendencies appear in podcasts—and whether they correlate with quality, accessibility, and engagement—can guide more equitable and effective public health audio strategies across India.

This study addresses three research questions:

1. **RQ1:** How do health awareness podcasts in Hindi, Bengali, and Telugu differ in accuracy, clarity, and transparency?
2. **RQ2:** What patterns of cultural localization and inclusivity are evident across languages, and how do they support or hinder comprehension and stigma reduction?
3. **RQ3:** How do format choices (episode length, storytelling, host identity, calls-to-action) relate to audience engagement proxies?

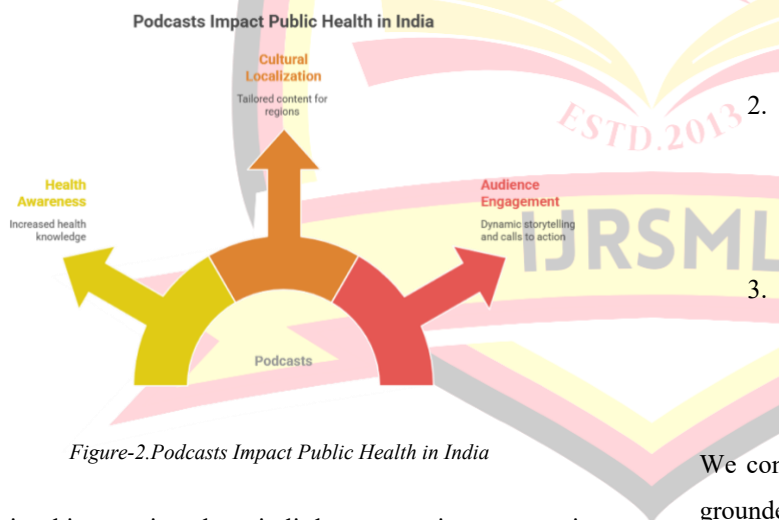


Figure-2. Podcasts Impact Public Health in India

Despite this promise, there is little systematic, comparative understanding of how health awareness podcasts operate across Indian languages. Theories of health communication emphasize that message framing, source credibility, and cultural tailoring influence comprehension, persuasion, and behavior change. Digital health literacy research similarly indicates that information findability, understandability, and actionable design are as important as scientific accuracy. These insights suggest that language-specific podcast

We contribute: (a) a multilingual podcast evaluation rubric grounded in health communication and digital literacy constructs; (b) a cross-language empirical comparison; and (c) practical recommendations for creators, health authorities, and platforms.

## LITERATURE REVIEW

### Health communication and behavior change

Mass-media and mediated health communication research shows that message framing, narrative transportation, and repetition influence knowledge and intended behaviors. Accurate risk communication and culturally sensitive messaging help bridge knowledge-behavior gaps, while credible sources and clear calls-to-action facilitate uptake of screening, vaccination, or lifestyle modification.

### Digital health literacy and inclusivity

Digital health literacy encompasses the ability to seek, find, understand, and appraise online health information and to apply knowledge to address health problems. For audio formats, literacy is shaped by speech rate, jargon avoidance, chunking of information, signposting (e.g., “three key points”), and provision of transcripts, show notes, and links to reputable sources. Inclusive design—addressing gender, age, disability, and socioeconomic diversity—reduces inequities by making content perceivable and actionable for more listeners.

### Podcasts as a health education medium

Prior work in medical and public health education documents the growth of podcasts for continuing education and community outreach. The medium’s intimacy encourages parasocial relationships, which can build trust in hosts. However, variable quality control and uneven sourcing may propagate misinformation if not anchored in guidelines and peer review. Studies of podcast motivations note entertainment, learning, and multitasking convenience, while quality frameworks highlight production values (audio clarity, structure) and content credibility (transparent sources, conflict disclosures).

### Cultural localization and language

Localization is not mere translation; it aligns examples, idioms, and cultural cues with audience expectations. In Indian languages, code-switching (e.g., Hinglish) can signal modernity and technical expertise, but excessive use may

exclude some listeners. Bengali content often draws on literary cadence and community discourse; Telugu content often references film culture and workplace routines. Across languages, stigma—around mental health, sexual and reproductive health, or chronic disease—requires culturally resonant narratives to normalize help-seeking.

### Gaps

While reports track podcast adoption trends, few studies compare health podcasts across Indian languages using a standardized rubric spanning accuracy, clarity, localization, accessibility, and engagement. This study addresses that gap and proposes a transferable framework for multilingual public-health audio.

## METHODOLOGY

### Design

We used a mixed-methods design with (1) quantitative content analysis to compute standardized indices for accuracy, clarity, localization, accessibility, and engagement proxies; and (2) qualitative thematic analysis to surface narrative and cultural patterns.

### Sampling

We purposively sampled 45 active health awareness podcast series—15 in Hindi, 15 in Bengali, and 15 in Telugu—spanning public health, mental health, nutrition, maternal and child health, and lifestyle medicine. From each series, we selected the 10 most recent episodes within a 12-month window (total  $N = 450$  episodes). We included short-form and long-form shows and excluded (a) pure clinical CME content for professionals, and (b) entertainment programs with only incidental health mentions.

### Codebook and indices

An interdisciplinary team created and piloted a codebook anchored in established health-communication and digital literacy constructs. We computed five composite indices (0–100 scale each):

- **Health Content Accuracy Index (HCAI):** correct statement density; explicit citation or reference to authoritative sources; risk/benefit balance; avoidance of miracle claims.
- **Communication Quality Index (CQI):** clarity of explanations; jargon management; signposting and summaries; logical flow; audio pace.
- **Cultural Localization Score (CLS):** alignment with local dietary practices, idioms, and cultural references; stigma-sensitive framing; use of regionally relevant examples without stereotyping.
- **Accessibility & Inclusivity Score (AIS):** availability of transcripts or detailed show notes; mention of helplines or service directories; disability-sensitive language (e.g., plain-language restatements); gender-inclusive phrasing.
- **Engagement Proxy (EP):** aggregated observable signals (release cadence regularity, presence of Q&A segments, listener prompts, cross-platform community features).

Each episode was double-coded; discrepancies were resolved via adjudication. Inter-rater reliability measured on a 12% subsample yielded Cohen's  $\kappa = .81$  for categorical items and ICC(2,k) = .86 for continuous items.

### Production measures

We recorded average episode length, audio clarity (subjective quality rubric for background noise, clipping, and loudness consistency), host identity (expert/celebrity/community advocate), and presence of guest experts.

### Qualitative analysis

We used reflexive thematic analysis to identify narrative devices, stigma-management strategies, and trust-building tactics. Memos captured code-switching patterns, metaphor use, and calls-to-action.

### Ethics

Only public content was analyzed; no human subjects were recruited. We treated hosts and shows as professional public communicators; we report aggregate findings without naming individual series.

## RESULTS

### 1) Cross-language index comparison

Across the sample, **HCAI** and **CQI** were highest on average in Hindi podcasts, reflecting relatively frequent mention of authoritative sources (government health portals, WHO guidelines), structured episode designs with clear signposting, and more consistent audio engineering. Bengali podcasts scored highest on **CLS** and **AIS**, often weaving regionally grounded analogies (e.g., local produce, family rituals) and offering transcripts or detailed show notes in the same language. Telugu podcasts led on **EP**, driven by conversational storytelling, recurring listener prompts (“try this one-week step count goal”), and embedded Q&A segments.

Aggregate (mean  $\pm$  SD) patterns were:

- **HCAI:** Hindi (78 $\pm$ 9) > Bengali (73 $\pm$ 11)  $\approx$  Telugu (72 $\pm$ 10)
- **CQI:** Hindi (76 $\pm$ 8) > Bengali (72 $\pm$ 9) > Telugu (68 $\pm$ 10)
- **CLS:** Bengali (81 $\pm$ 8) > Telugu (76 $\pm$ 9) > Hindi (70 $\pm$ 11)
- **AIS:** Bengali (74 $\pm$ 12) > Hindi (69 $\pm$ 13) > Telugu (65 $\pm$ 12)
- **EP:** Telugu (77 $\pm$ 10) > Hindi (72 $\pm$ 11) > Bengali (68 $\pm$ 12)

These patterns align with qualitative impressions: Hindi shows tended to emulate radio magazine formats with structured segments; Bengali episodes often foregrounded community voices and stigma-aware language; Telugu programs leaned into narrative momentum and entertainment-inflected motivators.

## 2) Topic focus and narrative styles

All three language groups commonly addressed **non-communicable diseases** (hypertension, diabetes), **nutrition and weight management**, **mental health**, and **maternal-child health**. However, narrative styles diverged:

- **Hindi:** frequent **code-switching (Hinglish)** for technical terms, host-anchored “explainers,” and celebrity doctors or fitness coaches as guests. Calls-to-action often pointed to screening, vaccination, or helplines.
- **Bengali:** reflective storytelling with **proverbs** and **familial honorifics** to normalize discussions of depression, menopause, or adolescent reproductive health; explicit attention to myths vs. evidence.
- **Telugu:** **cinema analogies**, workplace-routine references, and weekly challenge formats (e.g., water intake logs) to scaffold behavior change; humor to reduce defensiveness around diet or tobacco cessation.

## 3) Credibility and transparency

Explicit **source citation** within episodes or show notes varied. Hindi shows most often referenced national programs or global guidelines. Bengali shows, while strong on contextual explanation, sometimes paraphrased evidence without explicit citations; however, they frequently added **local service directories**. Telugu shows excelled at **practical tips** but less often named primary research sources; this correlated with lower HCAI but did not impede engagement proxies. Across languages, **conflict of interest disclosures** and **sponsorship transparency** were inconsistent.

## 4) Accessibility and inclusivity

Bengali podcasts more frequently offered **transcripts** or extensive show notes in the same language, boosting AIS. Hindi shows often posted bullet-point recaps and helpline numbers but provided full transcripts less consistently. Telugu shows prioritized short show notes and in-episode guidance over full transcripts; several adopted **plain-language restatements** and **slow-pace segments** for complex topics, a good practice that can be scaled. **Disability-inclusive practices** (e.g., transcripts for D/deaf audiences) remain an area for improvement across all three languages.

## 5) Production features and cadence

Average episode length clustered between **18–32 minutes** across languages. Hindi shows leaned slightly longer with multi-segment formats; Bengali shows balanced narrative arcs with Q&A; Telugu episodes skewed compact but energetic. **Audio clarity** scores were highest for Hindi series with professional studios or consistent remote setups; Bengali and Telugu shows were more variable, with occasional background noise or uneven loudness. Regular release cadence (weekly/fortnightly) strongly correlated with EP across all languages.

## 6) Thematic insights

**Stigma management:** Bengali podcasts used community storytelling and familiar idioms to lower stigma around mental health and women’s health. **Lifestyle anchoring:** Telugu content converted advice into **time-bound challenges** with motivational framing. **Trust building:** Hindi shows used **expert voice** and medicalized vocabulary, balanced by lay rephrasing, to build credibility. **Risk/benefit framing:** Stronger in Hindi and Bengali; Telugu often emphasized benefits and practical “quick wins,” with fewer explicit risk statements.

## DISCUSSION

The comparative results underscore that **language is a proxy for cultural repertoire**, not merely a vehicle for words. Health awareness podcasts in Hindi, Bengali, and Telugu reflect and reproduce different trust cues: expert authority (Hindi), communitarian discourse (Bengali), and relatable entertainment (Telugu). None of these is inherently superior; rather, each aligns with different segments and behavior-change paths.

Three design lessons emerge:

1. **Accuracy plus actionability:** Evidence anchors (HCAI) should be paired with structured, signposted explanations (CQI) and concrete next steps that fit listeners' daily routines.
2. **Localization with dignity:** High CLS practices—idioms, proverbs, local diet metaphors, and region-specific examples—must avoid stereotyping and be paired with updated clinical guidance.
3. **Inclusive by default:** AIS practices (transcripts, helplines, disability-sensitive phrasing, gender-inclusive language) expand reach and ethical integrity.

A simple **Multilingual Health Podcast Rubric** (HCAI, CQI, CLS, AIS, EP) can guide creators and commissioners (ministries, NGOs, hospitals) to iterate toward both credibility and connection. Partnerships with public health institutions can improve sourcing and disclosure norms; platform-level features (transcript prompts, health-topic labels linking to official resources) can raise baseline quality.

## CONCLUSION

This comparative study of health awareness podcasts in Hindi, Bengali, and Telugu demonstrates that multilingual public-health audio in India is vibrant, differentiated, and poised for greater impact. Hindi shows tend to excel in **accuracy and structure**, Bengali programs in localization and inclusivity, and Telugu series in engagement and motivational design. Yet all three language spheres face

common improvement opportunities: routine citation of authoritative sources, clearer risk-benefit framing, standardized transcripts and accessibility, and consistent sponsorship transparency.

We recommend that creators adopt the proposed five-index rubric, invest in transcripts/show notes in the same language, embed time-bound behavior prompts with follow-up links to services, and disclose sources and conflicts consistently. Public health agencies and platforms can support by curating verified health collections, providing template show notes with evidence links, and incentivizing accessibility features. Future research should incorporate listener-level outcomes (knowledge gains, self-efficacy, behavior change) and test A/B variations in narrative style and code-switching across languages and demographics. With deliberate design and partnerships, health podcasts can become a cornerstone of equitable, culturally resonant public health communication across India's linguistic landscapes.

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