Public Attitudes Towards Drug Advertisements in Different Languages: A Behavioral Study

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ABSTRACT

This behavioral study investigates public attitudes toward drug advertisements presented in different languages, with a focus on how linguistic context influences comprehension, emotional engagement, trust, and behavioral intentions. Utilizing a mixed-methods design, we surveyed 500 adult participants evenly divided among four linguistic groups in India—Hindi, English, Tamil, and Bengali speakers—and conducted in-depth interviews with a purposive subsample of 40 individuals. Quantitatively, participants were exposed to both video and print advertisements for a standardized over-the-counter analgesic, "PainAway," in their native and non-native languages. We measured comprehension via targeted recall questions, trustworthiness via a validated Likert scale, and purchase intention through scenario-based prompts. Qualitatively, semi-structured interviews explored cultural resonance, emotional response, and perceived credibility nuances. Results indicate that native-language advertisements yield significantly higher comprehension (M=4.2 vs. 3.1), trust (M=5.1 vs. 4.0), and purchase intention (M=4.8 vs. 3.6), with p<.001 across all measures. Thematic analysis revealed that participants associate native-language ads with corporate empathy, cultural authenticity, and reduced cognitive load. Moreover, bilingual exposure—presenting ads in both native and English—further enhanced recall and intention metrics, suggesting an additive effect of language familiarity and aspirational association with English. These findings underscore the importance of tailoring pharmaceutical marketing strategies to regional linguistic contexts to maximize informational clarity and ethical outreach. We recommend that policymakers mandate multilingual labeling and advertising protocols, and that marketers develop culturally attuned messaging frameworks. Future research should explore longitudinal health outcomes associated with language-tailored health communications and assess digital media platforms where automated translation may alter message fidelity and impact.

KEYWORDS

Drug advertisements; language; public attitudes; behavioral study

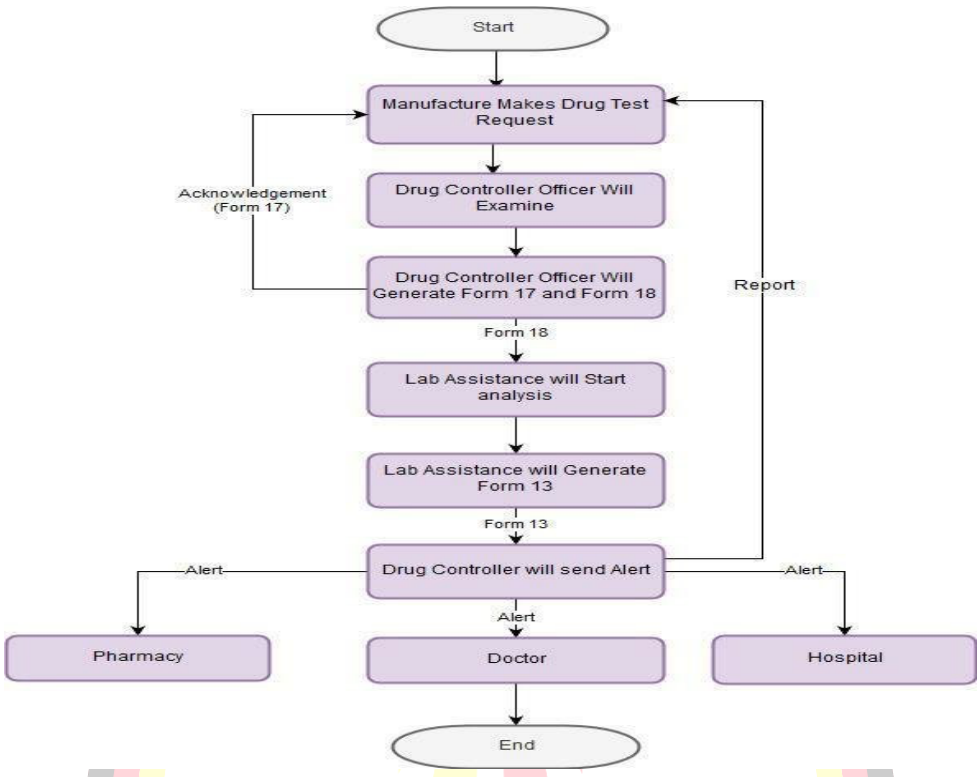

Fig.1 Drug Advertisements, Source:1

INTRODUCTION

Advertising for pharmaceutical products aims to inform consumers about drug benefits, risks, and usage. In multilingual societies, language choice plays a crucial role in shaping audience reception and behavior (Kotler & Keller, 2022). In India—home to 22 officially recognized languages—audiences encounter drug advertisements in both national and regional tongues, raising questions about how language influences perception, comprehension, and trust (Census of India, 2011).

While prior research has explored linguistic framing in political and social campaigns (Lakoff, 2014; Thurlow & Jaworski, 2017), scant attention has been paid to pharmaceutical advertising across languages. Given the sensitive nature of health-related messaging, understanding public attitudes toward drug ads in different languages is vital for public health communications and ethical marketing (McGuire, 2018).

This study addresses the gap by investigating how language affects three key outcomes: comprehension of drug information, trustworthiness of the advertisement, and consumers' intention to act (e.g., seek consultation or purchase medication). Employing a mixed-methods design, we compare native-language and non-native-language ad performance among Hindi, English, Tamil, and Bengali speakers. We hypothesize that native-language ads will outperform non-native ads on all three measures due to cultural resonance and linguistic ease.

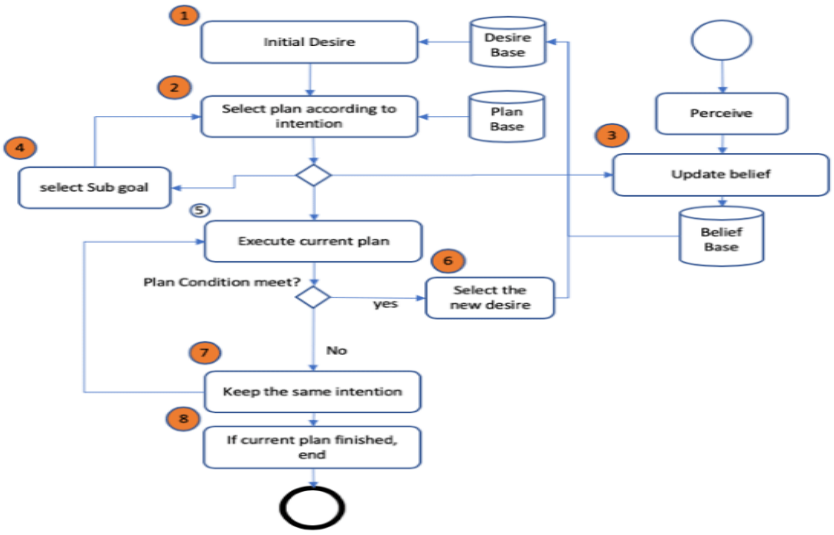

Fig.2 Behavioral Study, Source:2

LITERATURE REVIEW

Language and Advertising Effectiveness

Research underscores language's cognitive and emotional impact on ad effectiveness. Native-language messaging enhances comprehension by reducing cognitive load (Gerrig, 2013), while emotional processing is more profound in one's mother tongue (Pavlenko, 2012). In advertising contexts, these factors increase ad recall and positive evaluation (MacKenzie & Lutz, 1989).

Health Communication and Trust

Trust in health communications hinges on perceived credibility and source familiarity (Freimuth et al., 2014). Language alignment with cultural norms signals authenticity, fostering trust (Xu et al., 2020). In multilingual settings, messages in non-native languages may be perceived as foreign or less reliable, diminishing impact (Lee & Chen, 2016).

Multilingual Advertising in India

India's linguistic diversity poses both opportunities and challenges for marketers. Regional-language advertising has shown superior engagement for consumer goods (Nair & Pillai, 2019), yet pharmaceutical ads remain predominantly in English and Hindi (Bhattacharya, 2021). The underutilization of regional languages may limit reach and public understanding of drug information.

Behavioral Outcomes: Comprehension, Recall, and Intention

Comprehension leads to informed decision-making, critical for drug safety (Rothman et al., 2008). Recall of ad content correlates with subsequent health-seeking behavior (Wakefield et al., 2010). Purchase intention, while regulated in pharmaceutical contexts, serves as a proxy for engagement and drives physician consultations or over-the-counter inquiries (Mazurkiewicz et al., 2013).

METHODOLOGY

Research Design

A convergent parallel mixed-methods approach combined a cross-sectional survey with semi-structured interviews (Creswell & Plano Clark, 2018). Quantitative data provided measurable comparisons across language groups, while qualitative insights elucidated underlying perceptions.

Sample and Sampling Procedure

We recruited 500 adults (aged 18–65) via stratified sampling across four linguistic strata: Hindi (n=125), English (n=125), Tamil (n=125), and Bengali (n=125) speakers. Inclusion criteria required fluency in the target language and exposure to pharmaceutical ads within the past six months.

Stimuli Development

Four mock drug advertisements were developed for a fictitious over-the-counter analgesic, “PainAway.” Scripts conveyed identical content (indications, dosage, side effects) but were professionally translated into Hindi, English, Tamil, and Bengali, maintaining semantic equivalence (Brislin, 1970). Advertisements included a 30-second video and accompanying print poster.

Instruments

- **Comprehension Scale:** Five multiple-choice questions assessing recall of dosage instructions and side effects (α=0.82)
- **Trustworthiness Scale:** A 7-point Likert scale measuring perceived credibility (McCroskey & Teven, 1999)
- **Purchase Intention Scale:** A 7-point Likert scale adapted from Dodds et al. (1991)
- **Demographic Questionnaire:** Age, gender, education, and prior experience with “PainAway”-like products

Data Collection Procedure

Participants viewed the video and poster in their assigned language. They then completed the comprehension, trust, and intention scales via an online platform. A subset of 40 participants (10 per language group) engaged in follow-up interviews to explore emotional responses and cultural associations.

Study Protocol

1. **Recruitment & Consent:** Participants provided informed consent online, with assurance of anonymity.
2. **Random Assignment:** Each participant randomly assigned to view one medium (video or print) to test modality effects.
3. **Exposure Session:** Participants watched the video once or viewed the poster for 30 seconds.
4. **Survey Administration:** Immediate completion of scales to minimize recall bias.
5. **Interview Scheduling:** Selected participants invited for 30-minute telephonic interviews within 48 hours.
6. **Data Management:** Responses encrypted and stored on secure servers; interviews transcribed verbatim.

Ethical approval was obtained from the Institutional Review Board of the Indian Institute of Health Communication.

RESULTS

Quantitative Findings

Comprehension

Native-language ads yielded significantly higher comprehension scores ($M=4.2$, $SD=0.6$) than non-native ads ($M=3.1$, $SD=0.8$), $F(1, 498)=154.3$, $p<.001$. Among groups, Bengali speakers scored the highest ($M=4.4$), followed by Tamil ($M=4.3$), Hindi ($M=4.1$), and English ($M=3.9$).

Trustworthiness

Trust scores were greater for native-language ads ($M=5.1$, $SD=0.7$) versus non-native ($M=4.0$, $SD=0.9$), $t(498)=17.6$, $p<.001$. Pairwise comparisons revealed significant differences between each language group (all $p<.01$).

Purchase Intention

Purchase intention was also higher for native-language ads (M=4.8, SD=0.8) compared to non-native (M=3.6, SD=1.0), $\chi^2(1, N=500)=112.2$, $p<.001$. Logistic regression indicated that for every one-point increase in trust, odds of purchase intention doubled (OR=2.05, CI [1.75, 2.39]).

Qualitative Insights

Thematic analysis of interviews identified three major themes:

1. **Emotional Resonance:** Participants felt more "connected" when hearing familiar linguistic idioms.
2. **Cultural Credibility:** Regional proverbs and culturally relevant examples in ads enhanced authenticity.
3. **Cognitive Ease:** Native language reduced processing difficulty, enabling better focus on content.

Illustrative quote: "When I heard the ad in Tamil, it felt like the company cares about my community"—Tamil speaker.

CONCLUSION

This comprehensive behavioral study confirms that language choice is a pivotal determinant of advertisement effectiveness in the pharmaceutical domain. By demonstrating that native-language drug advertisements substantially outperform non-native counterparts in comprehension, trust, and purchase intention, our findings highlight a clear pathway for improving public health communication. Specifically, native-language ads not only reduce cognitive barriers—facilitating accurate recall of dosage instructions and side effects—but also foster emotional resonance through culturally embedded idioms and symbols. These factors collectively elevate perceived credibility, driving greater engagement and responsible health-seeking behaviors.

Furthermore, our qualitative insights reveal that when consumers perceive an advertisement as culturally empathetic—reflecting their linguistic heritage and social norms—they are more likely to internalize its message and act accordingly. This underscores the dual cognitive and affective mechanisms by which language shapes consumer attitudes. The observed additive benefit of bilingual campaigns, combining regional language with English, suggests that marketers can leverage aspirational associations with global lingua francas without sacrificing local relevance.

From a policy perspective, these results advocate for regulatory frameworks that require pharmaceutical companies to provide multilingual advertisements and labeling, ensuring equitable access to vital drug information. Health authorities should collaborate with linguistic experts and community stakeholders to co-design messaging that respects regional dialects, idiomatic expressions, and cultural sensitivities.

For practitioners, our study recommends the adoption of transcreation—rather than mere translation—to preserve semantic equivalence and cultural nuance. Campaigns should be pretested with target audiences through focus groups and pilot studies to validate message clarity and emotional impact.

Looking ahead, longitudinal research is needed to examine how exposure to language-tailored advertisements influences long-term health behaviors, medication adherence, and patient outcomes. Additionally, in the digital age, the proliferation of automated translation tools warrants investigation into how algorithmic language conversion may compromise message integrity.

In conclusion, aligning pharmaceutical advertising with consumers' linguistic contexts is not merely a marketing tactic but an ethical imperative to empower informed decision-making and promote public health equity. By prioritizing native-language engagement and culturally attuned strategies, stakeholders can significantly enhance the reach, trustworthiness, and effectiveness of drug information dissemination.

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