Comparison of Code Mixing and Code Switching in Bilingual and Multilingual Adults

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Abstract
Introduction: In multilingual societies like India, bilingual and multilingual speakers frequently alternate between languages during daily communication. These linguistic practices, known as code mixing and code switching, are natural features of speech, yet comparative evidence between bilingual and multilingual adults is limited.
Need: India is a multilingual nation where bilingual and multilingual speakers frequently use code mixing and code switching during daily communication. However, limited comparative evidence is available between bilingual and multilingual adults.
Aim: To compare the patterns and extent of code mixing and code switching in Hindi–Bhojpuri bilingual adults and Hindi–Bhojpuri–English multilingual adults.
Method: Forty adults aged 18–35 years were equally divided into bilingual and multilingual groups with equal gender representation. Speech samples were elicited using a narration task and analyzed using Myers-Scotton's Matrix Language Frame (MLF) model. Linguistic constituents analyzed included ML+EL constituents, embedded language islands, borrowed forms, and revisions. Statistical analysis involved MANOVA, paired t-tests, and independent t-tests.
Results: Code mixing and code switching were more frequent in bilingual participants than multilingual participants. Male speakers demonstrated higher occurrences than females. Hindi showed greater mixing and switching compared to Bhojpuri and English.
Conclusion: Code mixing and code switching are systematic and natural features of bilingual and multilingual speech. Language dominance and gender significantly influence these patterns, with implications for linguistic research and clinical practice.

Keywords: Code Mixing, Code Switching, Bilingualism, Multilingualism, Matrix Language Frame Model

1. Introduction

Communication involves the exchange of information, ideas, and emotions through verbal and non-verbal means. While monolingual speakers rely on a single linguistic system, bilingual and multilingual

individuals use two or more languages depending on communicative demands. Bilingualism refers to the functional use of two languages, whereas multilingualism involves the use of more than two languages.
In multilingual contexts, speakers often alternate between languages or integrate linguistic elements from different languages. These processes are referred to as code switching and code mixing. Code switching involves shifting between languages or varieties, while code mixing refers to the embedding of linguistic units from one language into another.
India represents a highly multilingual environment where such linguistic practices are common and socially accepted. Despite this, limited research has compared code mixing and code switching between bilingual and multilingual adults. Understanding these patterns is essential for speech-language pathologists working with linguistically diverse populations.

2. Need for the Study

Speech-language pathologists frequently assess bilingual and multilingual individuals. Differentiating typical language behaviors from disordered patterns requires an understanding of natural code mixing and code switching. This study addresses the lack of comparative data between bilingual and multilingual adults in the Indian context.

3. Aim and Objectives

Aim

To compare code mixing and code switching in bilingual and multilingual adults.

Objectives

- To analyze code mixing and code switching in bilingual adults
- To analyze code mixing and code switching in multilingual adults
- To compare language-wise patterns of code mixing and code switching
- To examine gender differences in code mixing and code switching

4. Methodology

4.1 Participants

A total of 40 adults aged 18–35 years participated in the study.

Group	Language Status	Males	Females	Total
Group I	Hindi–Bhojpuri Bilinguals	10	10	20
Group II	Hindi–Bhojpuri–English Multilinguals	10	10	20

4.2 Selection Criteria

Language proficiency was assessed using the Language Experience and Proficiency Questionnaire (LEAP-Q). Participants with adequate proficiency were included. Individuals with neurological, sensory, cognitive, emotional, or communication disorders were excluded. Written informed consent was obtained.

4.3 Stimulus and Procedure

A narration task on the topic **"Journey"** was used to elicit spontaneous speech. Participants were instructed to speak only in the assigned language. Speech samples were audio-recorded, transcribed using IPA, and analyzed using Myers-Scotton's Matrix Language Frame (MLF) model.

4.4 Data Analysis

Speech samples were analyzed for:

- ML + EL constituents
- Embedded language islands
- Borrowed forms
- Revisions

Statistical analysis was performed using SPSS. MANOVA, paired t-tests, and independent t-tests were applied.

5. Results and Discussion

Both groups demonstrated code mixing and code switching. However, bilingual adults showed higher frequencies than multilingual adults. Male participants exhibited greater occurrences than females. Hindi demonstrated higher mixing and switching compared to Bhojpuri and English, likely due to sociolinguistic dominance.

These findings support the view that code mixing and code switching are systematic and rule-governed linguistic behaviors.

6. Summary and Conclusion

The study compared code mixing and code switching in bilingual and multilingual adults. Bilinguals exhibited higher frequencies than multilinguals, with gender and language dominance influencing patterns. Code mixing and code switching are integral components of bilingual and multilingual communication.

7. Implications

- Enhances understanding of bilingual and multilingual language processing
- Assists clinical assessment in multilingual settings
- Provides evidence relevant to Indian populations

8. Limitations

- Small sample size
- Educational background not controlled

9. Future Directions

Future research should include larger samples, additional language combinations, and varied discourse tasks.

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