

Interlingual Homophone Retrieval in Typical Kannada–Tulu Bilinguals

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Abstract

Interlingual homophones which share similar phonological forms but differ in meaning across languages provide an important framework for understanding bilingual lexical processing. The present study aimed to investigate interlingual homophone retrieval abilities and examine language dominance patterns in typical Kannada–Tulu bilinguals. To achieve this forty individuals aged between 20 and 35 years proficient in Kannada and Tulu participated in the study.

Participants were instructed to identify and write the meaning of each word presented to them in audio-visual mode. The collected data was analyzed using paired and unpaired *t*-test with statistical significance determined at $p < .05$.

The results reveals a clear pattern of language dominance in interlingual homophone retrieval. Kannada-dominant participants demonstrated significantly higher retrieval scores in Kannada ($M = 11.13$, $SD = 1.30$) compared to Tulu ($M = 7.13$, $SD = 1.72$) while Tulu-dominant participants showed superior performance in Tulu ($M = 11.73$, $SD = 1.28$) compared to Kannada ($M = 7.33$, $SD = 1.54$). These differences were found to be highly significant ($p < .001$), indicating strong within-group and between group effects. These findings suggest that interlingual homophone retrieval is strongly influenced by language dominance with bilingual individuals demonstrating superior performance in their native or more frequently used language. This pattern further supports the interaction of bilingual lexicons where both languages are activated but selectively accessed based on dominance. Therefore, the study contributes to a better understanding of semantic and phonological processing in Kannada–Tulu bilinguals and highlights the importance of considering language dominance in bilingual language research.

Keywords: Interlingual homophones; bilingualism; language dominance; Kannada–Tulu bilinguals

1. Introduction

Semantics is a fundamental branch of linguistics that deals with the meaning of words, phrases and sentences. It focuses on the literal interpretation of linguistic elements rather than the speaker's intended or contextual meaning. This conventional meaning conveyed by language forms the basis of what is known as linguistic semantics (Yule, 2010).

The relation between words within a language play a crucial role in semantic organization and include phenomena such as homophones, homonymy and polysemy. Among these homophones are particularly significant as they are words that share the same pronunciation but differ in meaning, spelling or both (Rigges, 2005). For example, words like “new” and “knew” sound identical yet convey entirely different meanings (Wilson & Mihalicek, 2011). Such phonological similarity paired with semantic difference creates an interesting area for studying language processing.

The phenomenon becomes even more complex in bilingual contexts where similar-sounding words can exist across different languages. These are referred to as interlingual homophones from two languages that share similar or identical pronunciation but differ in meaning. In Kannada–Tulu bilinguals this interaction between languages provides a unique opportunity to examine how semantic retrieval operates when multiple linguistic systems are involved.

Nature of bilingual experience significantly influences how such interlingual homophones are processed. Factors such as language exposure, proficiency and frequency of use determine how effectively individuals manage and retrieve meanings from languages. According to the American Speech-Language-Hearing Association (ASHA, 2004) bilingual individuals differ widely in their language abilities based on these experiential variables. Consequently, these differences can impact how semantic representations are accessed during language processing.

Pexman, Lupker and Jared (2001) examined homophone effects using lexical decision tasks and found that homophones produced longer response times than control words. Their findings emphasized the importance of phonological information during early stages of lexical processing.

Caramazza, Costa, Miozzo and Bi (2001) investigated bilingual homophone retrieval and observed that both cumulative and language-specific frequencies affect naming latency. Their results highlighted the interaction between lexical representations across bilingual languages.

Green (2003) proposed that bilingual language processing involves simultaneous activation of both languages while suppressing the non-target language. This model explained how bilingual individuals efficiently manage competing lexical systems during communication.

Burke, Locantore, Austin and Chea (2004) studied homophone priming effects and found that repeated exposure strengthened phonological connections and improved lexical retrieval. Their observations demonstrated the role of phonological reinforcement in word production.

Maitreyee and Goswami (2009) examined Hindi–Kannada bilinguals and found that native speakers retrieved meanings of interlingual homophones more efficiently than non-native speakers. The study highlighted the influence of language dominance on bilingual lexical access.

Chambers and Cooke (2009) demonstrated that semantically supportive sentence contexts reduce activation of the non-target language during comprehension. Their findings showed that contextual cues facilitate selective language processing in bilinguals.

White, Abram, McWhite and Hagler (2010) reported that homophone errors may arise during lexical retrieval or orthographic encoding depending on syntactic ambiguity. Their work demonstrated the interaction between syntactic and lexical processing mechanisms.

Ortiz, Midgley and Mestre (2012) found simultaneous activation of L1 and L2 phonological representations during silent reading. Their findings supported the concept of non-selective bilingual lexical access.

Edward, Venkatesh and Saddy (2012) investigated multilingual individuals with aphasia and observed differences between lexical and syntactic processing across languages. Their findings suggested that bilingual language organization differs across linguistic levels.

Nguyen (2013) examined Vietnamese–English bilinguals and found stronger orthographic representations in the dominant language whereas phonological representations were shared across languages. The study emphasized the importance of phonological similarity in cross-linguistic activation.

Hino, Kusunose, Lupker and Jared (2013) investigated homophone processing across different languages and scripts and reported that homophones may either facilitate or delay lexical decisions. Their findings reflected the influence of language-specific characteristics on lexical processing.

Rajalekshmi, Kumaraswamy and Rao (2015) examined language dominance in bilinguals and multilinguals using interlingual homophones and observed superior retrieval in the native language among younger adults. Their results reinforced the role of language dominance in semantic retrieval.

Vinodhini and Ramya (2015) studied Tamil–English bilinguals and reported stronger lexical access for L1 compared to L2. Their observations indicated that bilingual lexical processing becomes more selective with age and language experience.

Felix and Kumaraswamy (2021) investigated Malayalam–Hindi bilinguals and found superior interlingual homophone retrieval in the native language. Their findings further supported the influence of language dominance on bilingual semantic processing.

NEED OF THE STUDY

Interlingual homophones are words that share similar or identical pronunciations but differ in meaning across languages. In Kannada and Tulu such words are especially relevant because both are widely used in the coastal region of Karnataka, where bilingual speakers routinely shift between the two in everyday communication. This makes Kannada-Tulu an important language pair for studying how meanings are retrieved when two closely related linguistic systems interact. In bilingual individuals, lexical representations are often organized separately for each language reflecting a distinction between lexicons. Therefore, examining how Kannada-Tulu bilinguals retrieve the meanings of perceived interlingual homophones can provide valuable insight into cross linguistic interaction of language dominance and bilingual semantic processing.

METHODOLOGY

Aim: The aim of the study was to investigate interlingual homophone retrieval in typical bilinguals and to examine language dominance and its pattern in Kannada–Tulu bilinguals.

Subjects: A total of thirty individuals (fifteen native Kannada speakers and fifteen native Tulu speakers) aged between 20-35 years.

Inclusion criteria:

- Individuals aged 20-35 years.
- Individuals proficient in Kannada and Tulu.

Exclusion criteria:

- Individuals with any history of speech, language, hearing impairment or neurological disorders.

Stimulus preparation: A list of 13 paired words commonly used in Kannada and Tulu with identical or similar pronunciation but different meanings (interlingual homophones) was prepared. The stimulus list was validated by 5 speech-language pathologists with more than five years of clinical experience to ensure the appropriateness and relevance of the selected words.

Procedure

The tasks were administered in the following sequence:

- The validated stimulus list was recorded by the examiner using a high quality presented to the participants via a Lenovo Core i5 laptop in a well-illuminated environment.
- Each word will be presented sequentially.
- Participants were instructed to carefully listen each presented word and write down its meaning accordingly.

Statistical analysis

Statistical analysis was performed using IBM SPSS Statistics (Version 23.0). Quantitative data were expressed as mean \pm standard deviation (SD). To examine differences between two independent groups an independent samples *t*-test (unpaired *t*-test) was conducted while within-group comparisons were carried out using a paired samples *t*-test. For all analyses the threshold for statistical significance was set at $\alpha = .05$, with a *p*-value less than 0.05 considered statistically significant.

RESULT AND DISCUSSION

The aim of the present study was to investigate interlingual homophone retrieval abilities in typical bilinguals and to examine language dominance and its pattern in Kannada–Tulu bilinguals using interlingual homophones.

Table 1

Shows the comparison of Interlingual Homophone Retrieval Scores Between Kannada and Tulu Bilingual Groups.

					Un Paired t test		
Group		N	Mean	Std. Deviation	t value	p value	
Interlingual Homophone Retrieval - Kannada(13)	KANNADA	15	11.13	1.302	7.290	0.000	HS
	TULU	15	7.33	1.543			
Interlingual Homophone Retrieval - Tulu(13)	KANNADA	15	7.13	1.727	-8.289	0.000	HS
	TULU	15	11.73	1.280			

*HS- Highly significant

FIGURE 1

Shows the comparison of Interlingual Homophone Retrieval Scores Between Kannada and Tulu Bilingual Groups.

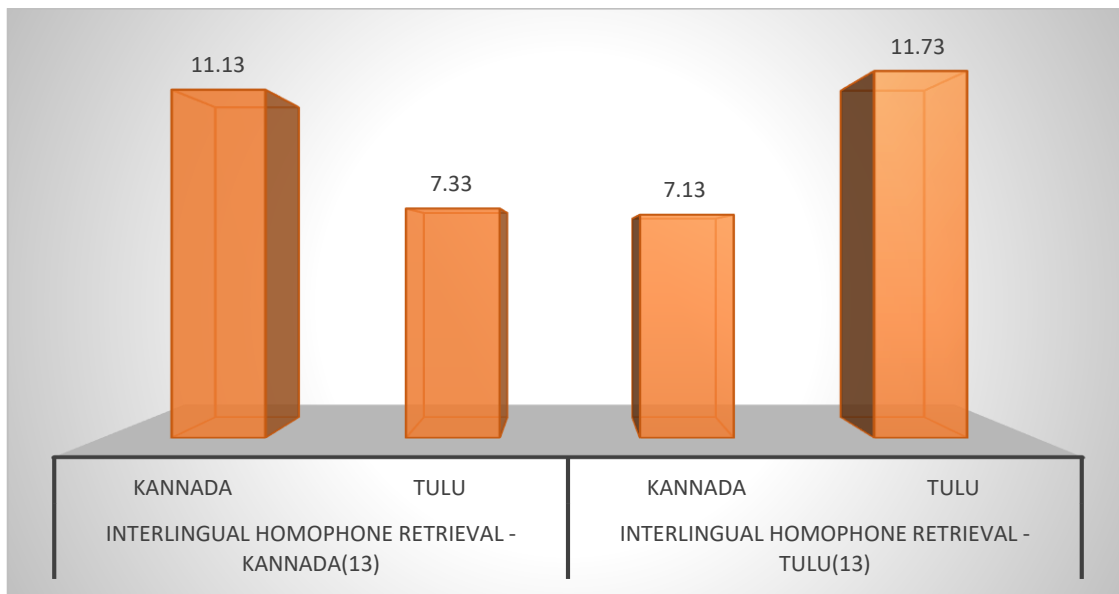


Table 1 and Figure 1 show the comparison of interlingual homophone retrieval scores between Kannada- and Tulu-dominant bilingual groups. For interlingual homophone retrieval in Kannada the mean score was 11.13 (SD = 1.30) for Kannada speakers and 7.33 (SD = 1.54) for Tulu speakers. The independent samples *t*-test revealed that this difference was statistically highly significant ($p < 0.001$).

Similarly, for interlingual homophone retrieval in Tulu, the mean score was 7.13 (SD = 1.73) for Kannada speakers and 11.73 (SD = 1.28) for Tulu speakers. The statistical analysis showed that the difference between the two groups was also highly significant ($p < 0.001$).

Table 2

Shows the comparison of Interlingual Homophone Retrieval Scores Within Groups Across Kannada and Tulu Conditions Using a Paired Samples t-Test

					Paired t test		
Group		N	Mean	Std. Deviation	t value	p value	
KANNADA	Interlingual Homophone Retrieval - Kannada(13)	15	11.13	1.302	7.611	0.000	HS
	Interlingual Homophone Retrieval -Tulu(13)	15	7.13	1.727			
TULU	Interlingual Homophone Retrieval - Kannada(13)	15	7.33	1.543	-9.054	0.000	HS
	Interlingual Homophone Retrieval -Tulu(13)	15	11.73	1.280			

FIGURE – 2

Shows the comparison of Interlingual Homophone Retrieval Scores Within Groups Across Kannada and Tulu Conditions Using a Paired Samples t-Test

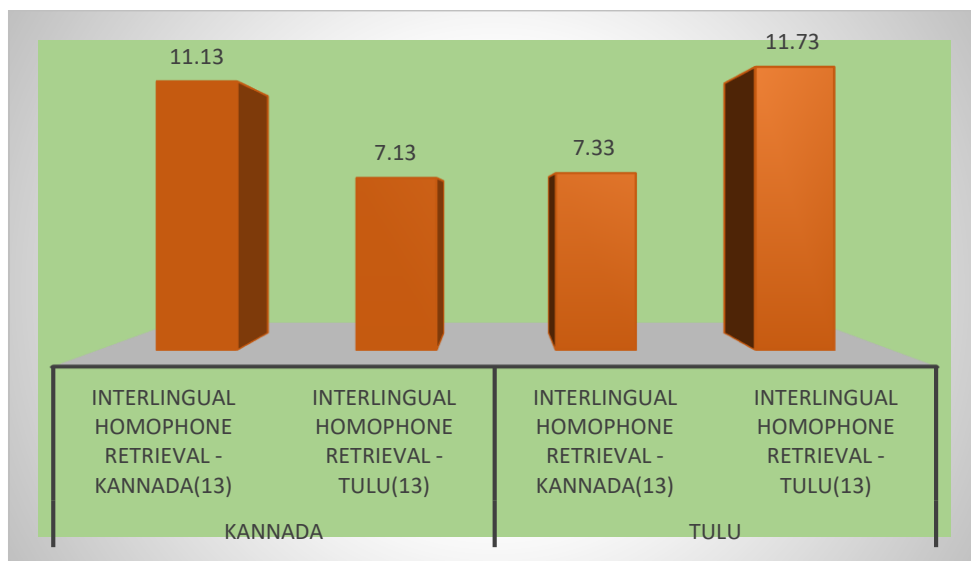


Table 2 and Figure 2 shows that within-group comparison of interlingual homophone retrieval scores across Kannada and Tulu conditions among bilingual participants. For the Kannada group the mean score

for interlingual homophone retrieval in Kannada was 11.13 ($SD = 1.30$) whereas for Tulu it was 7.13 ($SD = 1.73$). The paired samples t -test revealed that this difference was statistically highly significant ($p < 0.001$).

Similarly for the Tulu group the mean score for interlingual homophone retrieval in Kannada was 7.33 ($SD = 1.54$) while for Tulu it was 11.73 ($SD = 1.28$). The statistical analysis showed that this difference was also highly significant ($p < 0.001$).

DISCUSSION

The present study aimed to investigate interlingual homophone retrieval in Kannada–Tulu bilinguals and demonstrated that retrieval performance is significantly influenced by language dominance with participants consistently performing better in their native language across both between-group and within-group comparisons. This dominance effect was evident as Kannada speakers showed higher retrieval scores in Kannada ($M = 11.13$, $SD = 1.30$) compared to Tulu ($M = 7.13$, $SD = 1.73$), whereas Tulu speakers demonstrated higher scores in Tulu ($M = 11.73$, $SD = 1.28$) compared to Kannada ($M = 7.33$, $SD = 1.54$) with all differences being highly significant ($p < .001$). These findings indicate that bilingual individuals demonstrate stronger lexical access in their more frequently used or dominant language. Rajalekshmi, Kumaraswamy and Rao (2015) observed superior retrieval of interlingual homophones in the native language among younger bilinguals reinforcing the role of language dominance in semantic retrieval. Comparable findings were also reported by Felix and Kumaraswamy (2021) who reported superior interlingual homophone retrieval in the native language. These studies are in accordance to the present study.

Overall the findings of the present study provide strong evidence that interlingual homophone retrieval in Kannada–Tulu bilinguals are significantly influenced by language dominance, phonological activation, lexical interaction and cognitive control mechanisms involved in bilingual semantic processing.

SUMMARY & CONCLUSION

Interlingual homophones which share phonological similarity but differ in meaning across languages, serve as an important tool to understand cross-linguistic lexical access. The present study aimed to examine interlingual homophone retrieval in typical Kannada–Tulu bilinguals focusing on the role of language dominance in bilingual semantic processing. The study included 30 bilingual participants (native Kannada and Tulu speakers) aged 20–35 years and a validated set of 12 interlingual homophone pairs was presented audio-visually for meaning retrieval. The findings showed a clear dominance effect, with Kannada speakers performing better in Kannada ($M = 11.13$, $SD = 1.30$) than Tulu ($M = 7.33$, $SD = 1.54$) and Tulu speakers performing better in Tulu ($M = 11.73$, $SD = 1.28$) than Kannada ($M = 7.13$, $SD = 1.73$) with all differences being highly significant ($p < 0.001$). Within-group comparisons further confirmed that participants consistently demonstrated superior retrieval in their native language.

In conclusion interlingual homophone retrieval in Kannada–Tulu bilinguals are strongly governed by language dominance with better performance in the native or more frequently used language. The findings

highlight the role of phonological activation, lexical interaction and cognitive control in bilingual semantic processing contributing to a clearer understanding of cross-linguistic interaction.

LIMITATIONS OF THE STUDY

- Limited sample size.
- Only done in bilinguals.
- Administered only in Kannada-Tulu language.

FUTURE DIRECTIONS

- Use a larger sample size.
- Conduct the study in different Indian languages.
- Extend the study to different clinical populations.

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