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HARYANVI CONSONANTS: A MINIMAL PAIR ANALYSIS

CONSOANTES DO HARYANVI: UMA ANÁLISE DE PARES MÍNIMOS

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Abstract
This study explores the consonantal phonemic inventory of Haryanvi, which is spoken in the Punjab and Sindh provinces of Pakistan. Linguists have neglected this language in the past as it has been explored rarely. As far as the Haryanvi language spoken in Pakistan is concerned, no dictionary or grammar exists. Consequently, the present study is an endeavour to develop the phonemic inventory of the Haryanvi language so that it may be documented. For this purpose, the researchers have used minimal pairs to identify and confirm the existence of consonantal phonemes in the Haryanvi language. The minimal pairs were chosen from the Haryanvi language YouTube, TikTok, Facebook and Instagram videos. For collecting oral data and gathering minimal Haryanvi pairs, 25 semi-structured interviews of the native Haryanvi speakers were conducted. Furthermore, the researchers have conducted three focus group discussions that were of 30 minutes in which each group consisted of 10 native Haryanvi speakers. The researchers have verified the minimal pairs from five key

Resumo
Este estudo explora o inventário fonémico consonantal do haryanvi, língua falada nas províncias do Punjab e do Sindh, no Paquistão. No passado, os linguistas negligenciaram esta língua, uma vez que raramente foi objeto de estudo. No que diz respeito à língua haryanvi falada no Paquistão, não existe qualquer dicionário ou gramática. Consequentemente, o presente estudo constitui um esforço para desenvolver o inventário fonémico da língua haryanvi, de modo a que esta possa ser documentada. Para este efeito, os investigadores utilizaram pares mínimos para identificar e confirmar a existência de fonemas consonânticos na língua haryanvi. Os pares mínimos foram selecionados a partir de vídeos em haryanvi disponíveis no YouTube, TikTok, Facebook e Instagram. Para a recolha de dados orais e a compilação de pares mínimos de haryanvi, foram realizadas 25 entrevistas semiestruturadas com falantes nativos de haryanvi. Além disso, os investigadores realizaram três discussões em grupos focais com a duração de 30 minutos, em que cada grupo era

informants whose mother tongue is Haryanvi. The voicing contrast, aspiration contrast and segment distribution in the word-initial, medial and final positions have been analyzed in detail. Overall, it provides a detailed analysis of the consonantal system of the Haryanvi language. The study substantiates forty Haryanvi consonants, such as 16 stops, six nasals, five fricatives, four affricates, four laterals, two trills, two flaps and one glide. As this study has been conducted to document the phonemic inventory of Haryanvi, this work is an effort to promote the quality education (SDG 4) by enhancing literacy, multilingual education and cultural inclusion.

Keywords: Consonant. Haryanvi Language. Minimal Pairs. Phonemic Inventory. Quality Education.

composto por 10 falantes nativos de haryanvi. Os investigadores verificaram os pares mínimos junto de cinco informadores-chave cuja língua materna é o haryanvi. O contraste de sonoridade, o contraste de aspiração e a distribuição dos segmentos nas posições inicial, medial e final das palavras foram analisados em detalhe. Em geral, o estudo fornece uma análise detalhada do sistema consonantal da língua haryanvi. O estudo identifica quarenta consoantes haryanvi, tais como 16 oclusivas, seis nasais, cinco fricativas, quatro africadas, quatro laterais, dois trilos, dois cliques e um glide. Uma vez que este estudo foi realizado para documentar o inventário fonémico do haryanvi, este trabalho constitui um esforço para promover a educação de qualidade (ODS 4) através do reforço da literacia, da educação multilingue e da inclusão cultural.

Palavras-chave: *Consoante. Língua Haryanvi. Pares Mínimos. Inventário Fonémico. Educação de Qualidade.*

1 INTRODUCTION

Haryanvi (also known as Rangri in Pakistan) belongs to the Indo-Aryan language group and is spoken in various regions of Pakistan's Punjab and Sindh provinces. This language is used by the tribes and families whose ancestors moved and resettled in Pakistan from the regions which comprise present-day Haryana (Indian state). Its name is due to its connection with the Muslim Rangar (also Rajput) community, which constitutes most of its speakers (Nawaz et al., 2024).

According to Madan (Madan, 2001), the overwhelming majority of the Muslim Rajput community (also called Rangars) moved to Pakistan after the partition of the Indian Sub-continent in 1947. Sohdarvi (Sohdarvi, 2014) has opined that the Rangars brought their language derogatively named 'Rangri' by the locals. The language appears to be close to the languages spoken in the Indian state of Haryana. The name Rangri is not mentioned among the languages spoken in India. Consequently, the name Rangri instead of Haryanvi is only used in Pakistan. However, the researcher will use the name 'Haryanvi' in the current study for the following reasons. First, the speakers of this

language commonly use this name for it. Second, the name Haryanvi is linked to the origin of the language and its speech community.

> As far as the researchers know, no authentic research study on the phonemic inventory of the Haryanvi language has been carried out. The present study 'Phonemic Inventory of Haryanvi Consonants: A Minimal Pair Approach' is an endeavour to explore and catalogue the phonemic inventory of Haryanvi phonology. This study is aimed to develop the consonant phonemic inventory of the Haryanvi language and document and number the Haryanvi language phonemes.

Haryanvi is the term used for the language spoken by the people who belong to the Indian state of Haryana. According to Voegelin and Voegelin [4, pp. 263], the Haryanvi language is categorized as Indo-European, Indo-Iranian, Indo-Aryan, Central Zone and Western Hindi. Grierson [5, pp. 163-164] opines about it:

> The Western Hindi spoken in south-east of the Punjab has several local names but it is everywhere the same dialect. In the Hariana tract of Hissar and Jind, it is recognized by the Europeans under the name of Hariani. They, however, call the same form of speech when they meet it in Rotak, Dujana, the country parts of Delhi district and karnal, simply 'Hindi'. Natives of the country sometimes call it Jatu, and sometimes Bangaru, according to the caste of the people who speak it or to the tract in which it is spoken. … This form of Western Hindi has Punjabi to its north and west, and Ahirwati and Marwari (both dialects of Rajaathani) to its south, and it is a mixture of the three languages, with Western Hindi as its basis.
> Kaushik (Kaushik, 2015) has recognized various Haryanvi dialects in his dictionary of Haryanvi. He argues that these dialects are easily understood by the speaker of any dialect. The local Haryanvi speakers verify the following dialects.

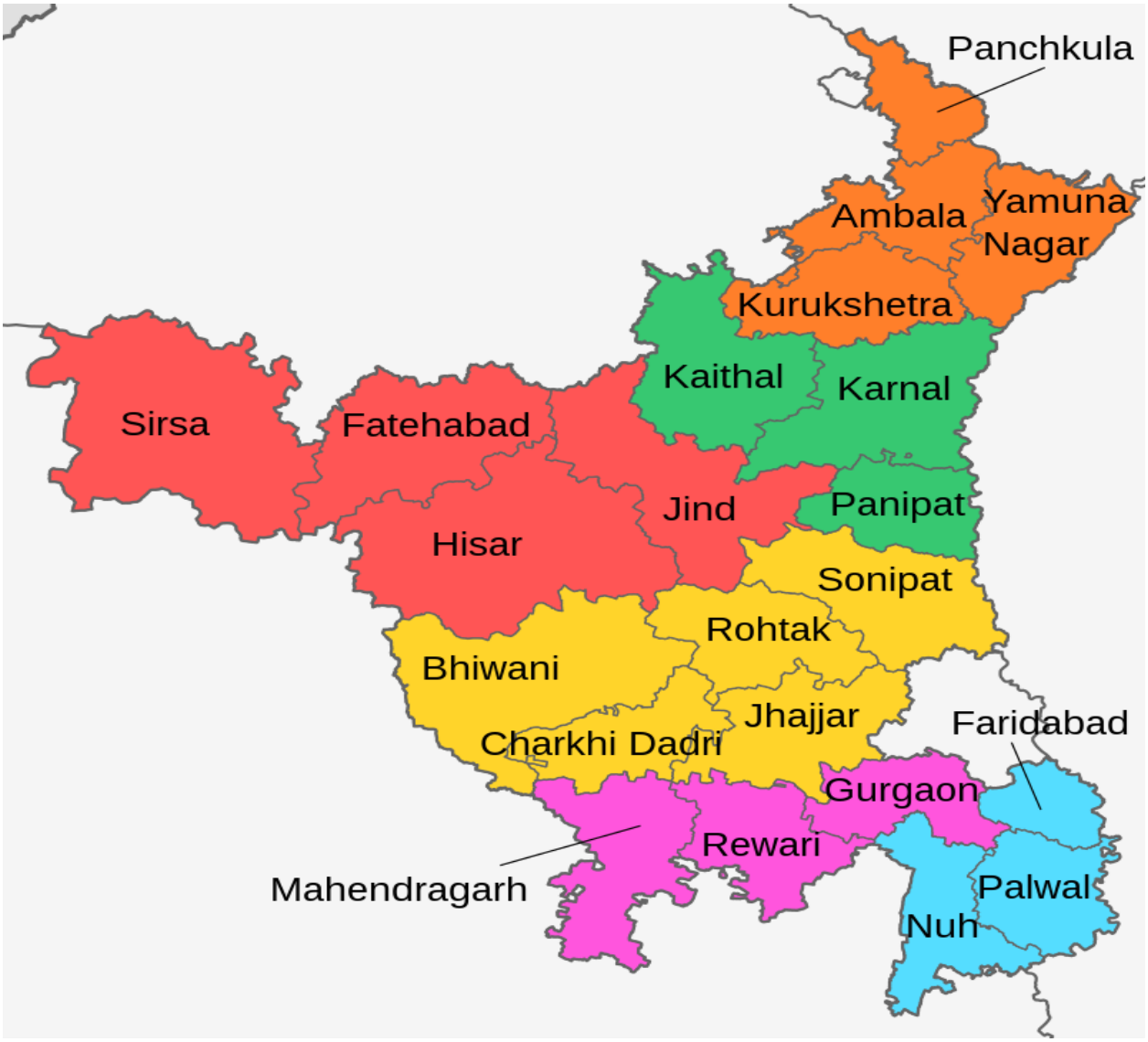
Traditionally, Bangaru is used for referring the language of Haryana as a whole, and presently it is used for variety spoken in the region of Jind. Khadar refers to the variety spoken in Rotak and Sonipat, and this term is also used for the area of north of Delhi at the Eastern border of Haryana. Around the regions of Fatehabad and Sirsa in the southward along Rajasthan border, Bagri is the speech variety which is spoken. This dialect is more influenced by the Punjabi than Hindi. Grimes (Grimes, 1988) mentions Bagri having over one million speakers who are nomadic, residing in general region of India and Pakistan. In the district of Gurgaon in southern Haryana and Alwar district of Rajasthan, Mewati dialect is spoken. Mewati dialect seems to be more mixed with Urdu

than other varieties of Haryanvi. Voegelin & Voegelin [8, p. 255] has described Mewati as dialect of Rajasthani while Grierson (Voegelin & Voegelin, 1977) has mentioned it as a transitional variety between Western Hindi and Rajasthani.

There are various dialects of Haryanvi. Devi (Devi & Mishra, 2021) has mentioned that Bangru which is called the dialect of the Jaats is spoken in the heart of the Haryana. It is widely spoken dialect which is used in the district of Rohtak, Panipat, Sonipat and surrounding areas. Sharma (Sharma, 2019) opines that Bangru is spoken in Kaithal and Jind districts and it is regarded standard dialect of Haryanvi. He adds that Haryanvi spoken in Hisar, Jind, Kaithal, Assangh (Karnal) and Gohana (Sonipat) is considered actual and standard form of Haryanvi that is very pleasant and varies as compared to the dialect which is spoken in Jhajjar, Sonipat and other areas. Devi (Devi & Mishra, 2021) has stated that Ahirwati is the second dialect of Haryanvi. It is used by the Yadav community of Haryana. It is prevalent in Ahirwal (Mahendragarh, Rewari, Charkhi Dadri, Nuh districts) and other regions like Kolsi (Rewari), Narnaul (Mahendragarh). Sharma (Sharma, 2019) argues that the people of Mahendragarh and Rewari districts speak Ahirwati dialect of Haryanvi. The third dialect, Bagri, is prevalent in Rajasthan adjoining areas including Sirsa, Hisar and Bhiwani districts [9-10]. Kauravi or Khari Boli is the fourth Haryanvi dialect. It is the major dialect of western Hindi language. Generally, it is used in Uttar Pradesh but this dialect is also spoken in those regions of Haryana that are adjacent to UP like Sonipat, Panipat, Karnal etc. The fifth, Braj Basha or Brij Basha or Gojri, is spoken in UP and nearby districts of Haryana such Palwal, Faridabad and Gurgaon. The sixth, Ambalvi or Puadhi dialect of Haryanvi has been influenced by the hilly language and Punjabi. The Haryanvi language speakers from Yamuna Nagar, Kurukshetra and Ambala speak this dialect. The seventh, Mewati dialect, is spoken in Nuh district of Haryana that adjoins the Rajasthan. Deshwali, the eighth dialect, is spoken in the old Rohtak district areas (Sonipat, Rohtak and Jhajjar). Khadari or Nardakhi is the ninth dialect of Haryanvi that is spoken in the areas of Panipat, Karnal and Kurukshetra. Despite their differences all these dialects are mutually intelligible for the Haryanvi speakers.

Figure 1

Districts of Haryana



1.1 Range of consonant inventory

Maddieson (Maddieson, 1984) has studied 562 languages and indicated that consonant inventories includes from a low number of 6 consonants to a high number of 122 consonants. The !Xóõ language that is spoken in Botswana has an inventory of 122 consonants whereas the Rotokas language which is spoken in Papua New Guinea has merely an inventory of 6 consonants. The more common size of the consonant inventory is in the low twenties. The consonant inventories having size (22 ± 3) are classified as

average and the others are categorized into categories small (range from 6-14 consonants), moderately small (15-18 consonants), moderately large (26-33 consonants) and large (34 or more consonants).

Languages having average range of consonant inventories exist in the most regions of the world. This situation suggests that average size really is representative of something customary for human languages. On the other hand, languages having small or large inventories exhibit quite distinct geographical differences in their distributions (Maddieson, 1984).

1.2 Phonemic inventory, phonetic inventory and phonotactic inventory

Ladefoged & Johnson (Ladefoged & Johnson, 2014) contends that phonemic inventory refers to the phonemes that exist in a language. Phonemes are the smallest units of sound which may change the meaning of the words when they are replaced with one another. Phonological system of each language is unique because same family languages differ with regard to number of phonemes. Phonemic inventory is a linguistically important and more abstract set of sounds in a specific language. As opposed to phonetic inventory that includes all sounds produced, phonemic inventory emphasizes on identifying the distinct sound units which carry meaning and distinguish words from one another. Phonemes in phonemic inventory are responsible for generating minimal pairs that are the words whose meaning differs due to single sound. For instance, in English ‘bat’ and ‘pat’ are the minimal pairs as the change of initial phonemes /b/ and /p/ modifies the meaning of these words.

Odden (Odden, 2022) opines that phonetic inventory encompasses the whole set of distinct speech sounds used in a particular language. In other words, it is comprehensive set of speech sounds that a person produces, irrespective of the fact whether these sounds are part of their native language or not. Moreover, it contains all the distinctive sounds which an individual may generate, including both vowels and consonants. The phonetic inventory of the English language consists of a diverse collection of the sounds produced by native and non-native speakers alike.

According to Kager (Kager, 1999), phonotactic inventory includes those set of rules which govern acceptable arrangement of phonemes in a certain language. It

comprises the permissible arrangements and combinations within a specific language. This inventory defines restrictions and rules determining how sounds of a language can be organized in syllables and then words. As far as English is concerned, phonotactic inventory recognizes different combinations of vowels and consonants which lead to plethora of linguistic possibilities and words.

The focus of this study is to develop the phonemic inventory of the Haryanvi language. Both the phonetic inventory and phonotactic inventory are not the subject matter of this study.

1.3 Objectives of the study

The objectives of this study are:

1. To develop the consonant phonemic inventory of the Haryanvi language
2. To document and number the Haryanvi language phonemes

1.4 Research questions

1. Which consonant phonemes are included in the Haryanvi language phonology?

2 LITERATURE REVIEW

2.1 Studies related to phonemic inventory

Hayes & Kirby (Hayes & Kirby, 2023) explored how phonotactic constraints affect size and structure of phonemic inventory. This study concluded that languages having complex syllable structure (permitting consonant clusters at onset or coda positions) have a tendency to smaller phonemic inventories whereas languages having simple syllable structures (V-only and CV syllables) generally tend to have larger phonetic inventories.

Din et al. (Din et al., 2019) worked on a study with title “Phonemic Inventory of Khowar Language: An Acoustic Analysis”. The aim of their study was to document and redefine Khowar language phonemic inventory using possible authentic and latest

linguistic instruments. They employed both qualitative and quantitative scales for this study. They gathered primary data for analysis in the form of recording of Khowar language native speakers of minimal pair list. The recoded data was analyzed using Praat (2017) for redefining the phonemic inventory of Khowar language. The study confirmed 43 consonant phonemes in Khowar language inventory including 16 oral stops which are produced using different places of articulation such as bilabial, dental, alveolar, retroflex, velar and uvular. It validated 3 nasals, 10 fricatives, 9 affricates, 1 trill, 2 approximants and 2 laterals. Furthermore, the study reaffirmed 6 monophthongs, 3 up-gliding diphthongs and 1 near-high front vowel that was ambiguous in the earlier studies.

Habib & Saeed (Habib & Saeed, 2016) investigated the acoustic characteristics of Pashto stops of Yousaf Zai dialect L1 speakers. The researchers used spectrographic analysis for measuring VOT, burst characteristics and formant transitions. They recorded each word in the given list, spoken by the native speakers of the Pashto Yousaf Zai dialect five times in random sequence. The study concludes that bilabial stop /b/ has the shortest VOT while velar stop /k/ has the longest. Moreover, the dental voiced /d/ has the shortest closure duration whereas bilabial plosive /b/ has the longest. Furthermore, the VOT of bilabial plosive is longer than the VOT of the retroflex.

Khan (Khan, 2013) conducted an investigation on Pahari (language spoken in Azad Jammu Kashmir, Pakistan) sound system. His study presented historical background, classification, dialects, social-linguistic condition and provided comprehensive analysis of consonant and vowel systems of the Pahari language. In Pahari, he labelled 30 consonants, 12 oral vowels, 4 nasal vowels and 6 diphthongs.

Latif (Latif, 2006) carried out a research study on phonemic inventory of Siraiki language and acoustics analysis of voiced implosives. She chose dialect of Multani Siraiki for this study. A list of words having “CVC” structure was presented to the speakers for recording. She used minimal pairs and parallel distribution for confirming phonemic inventory of Siraiki. Furthermore, acoustic analysis of the voiced implosives was done to make distinction between them and oral stops. This study verified the presence of voiced implosives in Multani dialect of Siraiki. Latif [] authenticated expansive consonant inventory for Siraiki, including 24 plosives (voiced and voiceless), 9 nasals (bilabial, alveolar, palatal, retroflex and velar), 9 fricatives, affricates, 2 laterals, 2 flaps, 2 trills, 1 approximants and 4 implosives. Ten vowels with distinction in length (three short and

seven long) and nasalization were reported by the researcher. Furthermore, he posited presence of the nasal vowels in Siraiki.

Raza et al. (Raza et al., 2004) explored the phonemic inventory of Sindhi and acoustic analysis of voiced implosives. They consulted Sindhi dictionary and identified minimal pairs to confirm the Sindhi language phonemes. They recorded sound segments of the native Sindhi speakers from Jacobabad and Indian Sindhi speakers for phonetic analysis and comparison. The findings of this study showed that the Sindhi language possessed rich phonemic inventory comprising 10 vowels and 46 consonants. They included plosives, fricatives, affricates, nasals, approximants and four voiced implosives-bilabial /ɓ/, dental /ɗ̪/, retroflex /ɖ/, and velar /ɠ/. Spectrograms and waveforms confirmed that the implosives exhibited glottal ingressive airflow, voicing during closure and shorter closure duration than pulmonic stops, assuring their phonemic position rather than allophonic variants. The analysis of minimal pairs proved that replacement of an implosive with a pulmonic counterpart altered word meaning in the phonological system of the Sindhi language.

Saleem et al. (Saleem et al., 2002) researched Urdu consonantal and vocalic sounds. They chose a group eight Urdu native speakers for this study. The well-known and established Urdu language books and dictionaries were consulted for the confirmation of the collected data. The speech processing soft wares Xwaves 5.3 by Entropic and Speech Analyzer by SIL were used for acoustic analysis of the speakers. They reported a comprehensive inventory of 43 consonant phonemes of which 28 are core phonemes (widely agreed upon) while 15 are peripheral (less commonly accepted across dialects). The findings highlighted strong voicing and aspiration contrast in plosives, definite retroflex-dental oppositions and presence of the borrowed fricatives /x, ɣ, q, z/ from Arabic and Persian. This study identified vocalic system comprising 10 contrastive vowels: three short, five long and two mid or majhul vowels (vowels with qualities between short and long). Moreover, three nasalized vowels were verified acoustically using distinctive formant and amplitude patterns.

Karamat (Karamat, 2001) presented the phonemic inventory of the Punjabi language dialect (Majhi) spoken in the region of Lahore and its surroundings. The researcher employed sounds parallel distribution to confirm their phonemic existence. She used minimal pairs for those sounds that might be allophonic to each other. She

investigated phonetic features of the sounds and analyzed the tonal structure. For this purpose, she recorded words five times randomly spoken by the native speakers (Lahore dialect) of Punjabi. The results identified three tones (high, mid, low) in the dialect. In addition to it, she established 32 consonants including 5 voiced plosive, 5 voiceless plosives, 5 voiceless aspirated plosives, 4 nasals, 8 fricatives, 1 trill, 1 flap, 3 approximants and 10 oral vowels (three short and seven long).

3 RESEARCH METHODOLOGY

3.1 Research design

The research methods for a specific study are determined by the nature of the study. The qualitative research methodology has been applied in this study. The current study is descriptive, exploratory, observation based and oral material is needed to conduct the investigation. The qualitative approach has been adopted to facilitate an in-depth investigation of linguistic patterns and the meanings embedded within them. This approach is employed to gather non-numerical data that offer insights to social phenomena as they occur in natural environments [23-24].

3.2 Location and target population

The Haryanvi speech community that lives in different districts of the Punjab province and speaks Haryanvi language is the target population for this research study. The researcher has been meticulous and careful in the selection of current study target population and he has collected only the oral material for this study from those respondents who use Haryanvi language in their daily routine life.

3.3 Participants

For this study, the researcher chose participants partly according to the criteria that was developed by Chambers & Trudgill (Chambers & Trudgill, 1998) to conduct their studies in the area of dialectology. The researcher preferred non-mobile, older, rural

males (NORM) as participants in this study but he did not follow the criterion completely due to particular reasons. First, strict adherence to the criteria of NORM would have kept the women out of the reckoning that resulted in losing valuable language-related information and linguistic data. Hence, women were also selected for the study. Second, it was difficult to find non-mobile male participants, thus the participants who had spent some time at other places were chosen for this study. Third, the researcher also gathered data from well-travelled the Haryanvi language speakers considering their interest in language promotion and language knowledge. Some of the participants also assisted as key informants for data authentication and validation.

The sample comprised the Haryanvi video recordings from YouTube, TikTok and social media. Moreover, 25 semi-structured interviews of the native Haryanvi speakers were conducted for collecting oral data. Furthermore, the researcher conducted three focus group discussions that were of 30 minutes in which each group consisted of 10 native Haryanvi speakers. The dada thus gathered was verified, validated and authenticated by five native Haryanvi speakers from various walks of life who were key informants for this study. The rationale for this is that oral research in language can be administered in its genuine culture and social context in which related social factors can be explored. Hence, different three data gathering methods were used for this study. In research, the use of more than one sources of data is termed triangulation [26, 27]. The purpose to adopt triangulation in the process of data collection was to understand the phenomenon comprehensively, eliminate biases and enhance the validity of this study.

3.4 Selection of participants

The purposive sampling technique has been adopted in the current study. This non-random sampling technique is used for social sciences where the study emphasizes the cultural, social and linguistic spheres.

To select study sample five key informants were chosen who guided the researcher about the target population. They are insightful members and representatives of the target Haryanvi community. They carry knowledge significant for the research study and they are also willing to contribute through their knowledge. The key informants are the native Haryanvi speakers who use the Haryanvi in their daily routine. They have listened the

collected data and verified and authenticated it that the gathered data has been taken from the Haryanvi language speakers and is suitable for the study.

3.5 Data collection

The nature of the current study is observational as the study aims to explore the phonemic inventory of the Haryanvi language. The research tools to achieve research objectives and investigate research questions for this study are:

1. Video Recordings (YouTube, TikTok and Social media)
2. Interviews
3. Focus Group Discussion
4. Participatory and non-participatory observation

Primarily, the current study is observational and it is chiefly based on video recordings (Youtube, TikTok and social media), interviews and focus group discussions.

3.6 Key informants

The selection of Key Informants (KI) was based on their knowledge of the Haryanvi, its history and their vast experiences. The selection criterion for Key Informants was that Haryanvi must be their mother tongue and they have sufficient competency and proficiency in English language. Thus, those who are educated and well-travelled have been chosen as KI because of their greater competence and proficiency in both the Haryanvi and English languages. Five KI's were selected to verify and validate the collected data for this study.

3.7 Data verification and validation

Each recording was played for the KI to verify and validate whether the speakers were using the Haryanvi or any other like language like Punjabi or Urdu. The researcher devised an opinion sheet with checklist which was consisted of respondent's number and judgment of KI about participant's language. Only the recordings about which at least

three among five KI were agreed that the Haryanvi had been spoken was finalized for analysis.

3.8 Haryanvi minimal pairs

According to McGilvray (McGilvray, 2005), “A minimal pair is a pair of words which vary in a single phoneme”. They differ by only single sound but in the same place. In phonetics and phonology, minimal pairs play important role to identify phonemic contrasts and help to define the boundaries of individual phonemes (Mlambo, 2025). They work as an instrument to validate that two or more than two sounds are contrastive. Ottenheimer (Ottenheimer, 2012) contends that “the easiest and clearest method for identifying phonemes of a language is the minimal pair test”.

To establish consonantal phonemic inventory of the Haryanvi language, the researcher identified the minimal pairs which confirm the existence of these phonemes in this language. The minimal pairs were chosen from the data collected through videos, semi- structured interviews and focus group discussions. The researcher verified and validated the minimal pairs as the Haryanvi language words consulting with the key informants. The researcher used high-quality Android smartphone using its inbuilt voice recording application as recording tool and the recordings were almost background noise free.

4 RESULTS

4.1 Phonemic inventory of Haryanvi

This section presents phonemic inventory of Haryanvi consonants. Karamat (Karamat, 2001) argues that documented phonemic inventories are the basis for analysis and they provide foundation for further investigation about status of the phonemes particular to the dialects. Forty consonant phonemes in Haryanvi have been labeled and established through phonemic analysis which includes minimal pairs, aspiration contrasts and voicing and segments distribution in the word initial, medial and final positions. The results of phonemic analysis is described in detail.

Table 1

Minimal Pairs for Haryanvi Consonants

Phoneme	Minimal Pair		Minimal Pair	
p	pɑɳi:	(water)	bɑɳi:	(language)
pʰ	pʰu:l	(flower)	bʰu:l	(mistake)
b	bɑp	(father)	ʤɑp	(repeat)
bʰ	bʰɑʤ	(run)	rɑʤ	(rule)
ʈ	ʈo:li:	(quick)	bo:li:	(dumb or mad)
ʈʰ	ʈʰaɭi:	(plate)	taɭi:	(key)
ɖ	ɖɑ:ɭ	(pulse)	bɑ:ɭ	(hair)
ɖʰ	ɖʰən	(wealth)	rən	(war field)
t	tu:m	(jewelry)	du:m	(low worker)
tʰ	tʰɑt	(grandeur)	kʰɑt	(cot)
d	dɑ:li:	(branch)	sɑ:li:	(sister in law)
dʰ	dʰi:m	(stone piece)	pʰi:m	(opium)
k	kɑm	(work)	gɑm	(village)
kʰ	kʰo:n	(blood)	ʧo:n	(flour)
g	gɑ:nɑ:	(song)	rɑ:nɑ:	(caste)
gʰ	gʰər	(home)	pʰər	(proud)
f	fən	(skill)	mən	(attention)
v	vɑʤ	(sound)	rɑʤ	(rule)
s	su:sɑ	(hare)	gʰu:sɑ	(fist)
ʃ	bɑʃəɳ	(speech)	rɑʃəɳ	(food)
ɦ	ɦɑ:ʈʰi:	(elephant)	sɑ:ʈʰi:	(companion)
ʧ	ʧɑ:ki:	(grinding wheel)	ʈɑ:ki:	(window)
ʧʰ	ʧʰo:rɑ:	(boy)	bʰo:rɑ:	(unlucky, crumb)
ʤ	ʤɑt	(caste)	kʰɑt	(cot)
ʤʰ	ʤʰɑʤ	(aero-plane)	bʰɑʤ	(run)
m	mu:sɑ	(mouse)	su:sa	(hare)
mʰ	mʰɑrɑ:	(my)	ʈʰɑrɑ:	(your)
n	no:tɑ	(barber)	lo:tɑ	(ewer)
nʰ	mʊnʰ	(mouth)	mʊʈ	(death)
ɳ	pɑɳi:	(water)	pɑpi:	(criminal)
ŋ	rəŋ	(colour)	rən	(war field)
l	lɑm	(war)	ʧɑm	(leather)
lʰ	lʰɑs	(corpse)	bɑs	(smell)
ɭ	ɖʰʊɭ	(dust)	ɖʰʊm	(fame)
ɭʰ	sɑɭʰ	(cottage)	sɑl	(year)
r	ro:l	(humiliate)	bo:l	(to speak)
rʰ	rʰeit	(well)	pʰeit	(union)
ɽ	mo:ɽ	(turn)	mo:r	(peacock)
ɽʰ	ʤɑ:ɽʰ	(molar)	ʤɑ:m	(to grow)
j	jɑr	(friend)	bɑr	(door)

Table 2

Haryanvi Consonants.

Manner	Bilabial	Labio-dental	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal
Stops	p b pʰ bʰ		t̪ d̪ t̪ʰ d̪ʰ	t d tʰ dʰ			k g kʰ gʰ	
Nasals	m mʰ			n nʰ	ɳ		ŋ	
Fricatives		f v		s		ʃ		ɦ
Affricates						ʧ ʤ ʧʰ ʤʰ		
Laterals				l lʰ	ɭ ɭʰ			
Trills				r rʰ				
Flaps					ɽ ɽʰ			
Glides						j		

Table 1 indicates forty consonant phonemes in the Haryanvi language. The consonant sound /ʃ/ exists in Haryanvi but it is used rarely because it is replaced with /s/ by the Haryanvi speakers. Mostly young and educated generation of Haryanvi speakers use /ʃ/ in their speech while old generation and illiterate speakers do not use this phoneme. This phoneme appears to be the addition in Pak Haryanvi due to interference of Urdu, Punjabi and English. There are 16 aspirated consonant phonemes which is unique characteristic in the phonemic inventory of this language. These aspirated phonemes show close proximity of the Haryanvi with other regional languages such as Punjabi, Hindi and Siraiki. The use of consonant aspirated phonemes /nʰ/, /ɭʰ/ and /rʰ/ is not frequent but these are used by all the Hayanvi speakers.

4.2 Distribution of consonant phonemes

4.2.1 Stops

Laver (Laver, 1994) argues that a stop is the sound made by complete blockage of the air flow in the vocal tract and afterwards releasing it. In other words, the underlying articulatory attribute of a stop consonant is the momentary obstruction of vocal tract making articulatory occlusion at various articulation places and then suddenly releasing

the blocked air. According to Anderson et al. (Anderson et al., 2022), a fully articulated stop sound has three phases: the beginning of blockage or the catch (implosion), the hold (occlusion) and opening of air passage again or the release (explosion). Stops sounds may be voiceless or voiced. For instance, in English [p], [t] and [k] are the voiceless stops while [b], [d] and [g] are the voiced stops.

Table 3

Voicing Contrast of Haryanvi Stops.

Phonemes			**Voiceless**		**Voiced**	
p	vs	b	pələʈi	(bread container)	bɑt	(wait)
			ʤɑpɳɑ:	(repeat)	ɖɑbɳɑ:	(to press)
			ʈɑp	(fever)	gɑb	(dirt)
ʈ	vs	ɖ	ʈo:li:	(quick)	ɖa:l̩	(pulse)
			ʈo:ʈɑ	(parrot)	ɑ:ɖər	(respect)
			bɑʈ	(talk)	kəɖ	(when)
t	vs	d	tu:m	(jewelry)	du:m	(low worker)
			no:tɑ	(barber)	ɑndi:	(arrogant, beautiful)
			nɑt	(refuse)	kʰɪnd	(sprinkle or fall)
k	vs	g	kɑm	(work)	gɑm	(village)
			lɑ:kəʈ	(wood log)	logəi:	(wife)
			sɑ:k	(engagement)	log	(husband)

Table 4

Aspiration Contrast of Haryanvi Stops.

Phonemes			**Un-aspirated**		**Aspirated**	
p	vs	pʰ	pɑ:g	(turban)	pʰɪkər	(tention)
			sʊpɳɑ:	(dream)	kəpʰəɳ/ kəfəɳ	(burial dress)
			bɑp	(father)	mɑpʰ	(forgive)
b	vs	bʰ	bɑgʰ	(cougar)	bʰɑg	(luck)
			ɑmbl̩i:	(tamarind)	gebʰəɳ	(pregnant)
			ʤəbɑb	(reply)	ʤi:bʰ	(tongue)

ʈ	vs	ʈʰ	ʈaɭi:	(key)		ʈʰaɭi:	(plate)
			piːʈəɭ	(brass)		saːʈʰiː	(companion)
			kʰəʈ	(letter)		ɦɑːʈʰ	(hand)
ɖ	vs	ɖʰ	ɖiːvɑ	(lamp)		ɖʰʊɭɑ	(white)
			mʊrɖɑ	(dead)		ɑɖʰʊriː	(incomplete)
			bəɭəɖ	(ox)		soɖʰ	(care or sense)
t	vs	tʰ	tokəɳiː	(container)		tʰodiː	(chin)
			mɑtiː	(dust)		gɔːtʰiː	(ring)
			tʰɑt	(grandeur)		pɑːtʰ	(lamb)
d	vs	dʰ	dɑːngər	(cattle)	dʰɑːl	(manner)	
			bəddɑ	(large)		pədʰɑeː	(studies)
			lɑd	(affection)		kɑndʰ	(wall)
k	vs	kʰ	kiʈ	(where)	kʰɑʈiː	(carpenter)	
			ʈɑːkiː	(window)		bəkʰəʈ	(time)
			sɑːk	(engagement)		eːkʰ	(sugarcane)
g	`vs	gʰ	geːl	(accompany)		gʰɑl	(pour)
			ɑngəɳ	(courtyard)		kingʰeː	(where)
			bəg	(go)		bɑgʰ	(cougar)

Table 5

Word Level Distribution of Haryanvi Stops.

Phonemes	Initial		Medial		Final	
p	pɑːg	(turban)	ʤɑpɳɑː	(repeat)	ʈɑp	(fever)
pʰ	pʰɑɭiː	(pea-pod)	kepʰəɳ/ kəfəɳ	(burial dress)	ʈeləpʰ	(uproot)
b	bɑhiː	(farming)	ʤəbɑb	(reply)	gɑb	(dirt)
bʰ	bʰɑg	(luck)	gebʰəɳ	(pregnant)	ʤiːbʰ	(tongue)
ʈ	ʈɑʈɑ	(hot)	biːʈər	(inside)	bʰɑʈ	(sweet dish)
ʈʰ	ʈʰɑɭiː	(plate)	saːʈʰəɳ	(friend)	ɦɑːʈʰ	(hand)
ɖ	ɖiːvɑ	(lamp)	ɑːɖər	(respect)	bəɭəɖ	(baffalo)
ɖʰ	ɖʰʊɭɑ	(white)	ɑɖʰʊriː	(incomplete)	soɖʰ	(care or sense)
t	tuːm	(jewelry)	ʤʰʊtiː	(calf)	nɑt	(refuse)
tʰ	tʰodiː	(chin)	gəntʰiː	(onion)	lətʰ	(stick)
d	duːm	(low worker)	tʰədɑ	(severe or deep)	lɑd	(affection)
dʰ	dʰɑːl	(manner)	pədʰɑeː	(studies)	kɑdʰ	(pull out)
k	kiʈ	(where)	tʃɑːkiː	(grinding wheel)	sɑːk	(engagement)

kʰ	kʰɑ:s	(special)	bekʰət̪	(time)		likʰ	(write)
g	ge:l	(accompany)		ɑngən̪	(courtyard)		ləg (up to)
gʰ	gʰən̪ɑ	(much)		kingʰe:	(where)	mɑgʰ	(11th month)

The aforementioned analysis distinguishes sixteen oral stops in Haryanvi phonemic inventory. Table 2 presents that the Haryanvi language has sixteen stops which are articulated using four different articulation places namely bilabial /p, b, pʰ, bʰ/, dental /t̪, d̪, t̪ʰ, d̪ʰ/, alveolar / t, d, tʰ, dʰ/ and velar /k, g, kʰ, gʰ/. Furthermore, table 3 confirms that Haryanvi stops have four way voicing contrast i.e. voiced un-aspirated /b, d̪, d, g/, voiced aspirated /bʰ, d̪ʰ, dʰ, gʰ/, voiceless un-aspirated /p, t̪, t, k/ and voiceless aspirated /pʰ, t̪ʰ, tʰ, kʰ/. It is shown in table 4 that all the Haryanvi language stops both voiced and voiceless have contrast between aspirated and un-aspirated phonemes because all voiced and voiceless un-aspirated stops have voiced and voiceless aspirated counterpart stop phonemes. The presence of aspirated phonemes is common in the group of Indo-Aryan languages. Hussain (Hussain, 2010) asserts that voiced aspirated plosives are present in the Urdu language. Habib (Habib, 2022) states that voiced aspirated stops are found in Punjabi. But the Haryanvi language is unique in the way that it has aspirated phonemes for all voiceless and voiced stops which is rare in other languages.

Voicing contrast of Haryanvi stops shows all voiceless and voiced plosive phonemes are found at initial, medial and final positions in Haryanvi words. Word level distribution of Haryanvi stops in **table 5** indicates the presence of aspirated and un-aspirated plosives in Haryanvi words at initial, medial and final position.

4.2.2 Nasals

Ladefoged & Johnson (Ladefoged & Johnson, 2014) opine that nasal sounds are articulated by lowering the velum to permit the air stream passing through nasal cavity. In other words, nasals are produced by redirecting airflow through nose rather than allowing it to escape out of mouth. They are made by blocking airflow in mouth and releasing the sound through nose. There are three nasal phonemes in English. /m/ is the bilabial (both lips), /n/ is the alveolar (tongue and alveolar ridge) and /ŋ/ is the velar (tongue and velum or soft palate). As the vocal cords vibrate throughout all the nasals, they are classified as voiced (Roach, 2009).

Table 6

Haryanvi Nasals.

m	vs	n	muːsɑ	(mouse)	niːɑrɑ	(different)
			ʈəmɑkʊ	(tobacco)	bɑngɑ	(twisted)
			niːm	(foundation)	gijɑn	(understanding)
n	vs	ɳ	nədʒər	(eye-sight)	------	
			kɑnb	(shiver)	oːtaɳɑː	(take responsibility)
			ɖʒəmin	(earth)	nʊɳ	(salt)
ɳ	vs	ŋ	------		------	
			pʊrɑːɳɑː	(old)	məŋʈɑ	(beggar)
			pʰɑgəɳ	(6th month)	ɖəŋ	(shocked)
ŋ	vs	n	------		nɑɽɑː	(drawstring)
			məŋnɑ	(begging)	mənneː	(me)
			rəŋ	(colour)	ʧoːn	(flour)

Table 7

Aspiration Contrast of Haryanvi Nasals

Phonemes			**Un-aspirated**		**Aspirated**	
m	vs	mʰ	moː	(love)	mʰɑrɑː	(my)
			niːmbʊ	(lemon)	ʃijɑmʰi/ sijɑmʰi	(in front)
			gɑm	(village)	------	
n	vs	nʰ	nʊɳ	(salt)	------	
			mɑnəs	(human)	nənnʰɑ	(small)
			ɖʒəbɑn	(language)	mʊnʰ	(mouth)

Table 8

Word Level Distribution of Haryanvi Nasals.

Phonemes	**Initial**	**Medial**	**Final**
m	mɑːŋ (parting)	nəmɑdʒ (prayer)	bɑləm (lover)
mʰ	mʰəns (buffalo)	ʃijɑmʰi/ sijɑmʰi (nearby)	------
n	nedʒuː (string)	məndʒəɭ (destination)	kʰoːn (blood)
nʰ	------	nənnʰɑ (small)	mʊnʰ (mouth)
ɳ	------	tʰəɳdɑː (cold)	ɖaməɳ (woman outfit)
ŋ	------	məŋʈɑ (beggar)	rəŋ (colour)

Table 2 shows that Haryanvi has six nasal phonemes: bilabial un-aspirated /m/, bilabial aspirated /mʰ/, alveolar un-aspirated /n/, alveolar aspirated /nʰ/, retroflex /ɳ/ and velar /ŋ/. All nasals are voiced because they are sonorant. **Tables 7** and **8** indicate that bilabial un-aspirated nasal /m/ and alveolar un-aspirated nasal /n/ appear word initially,

medially and finally while retroflex /ɳ/ and velar /ŋ/ does not appear word initially in the Haryanvi language. Nasal aspirated phonemes exist in Haryanvi which are bilabial aspirated and alveolar aspirated /nʰ/. /mʰ/ does not come word finally and /nʰ/ does not occur word initially.

4.2.3 Fricatives

Ladefoged & Johnson (Ladefoged & Johnson, 2014) contend that fricative consonants are produced when an active articulator comes near to another passive articulator but it does make contact and air is passed through the narrow passage between these two articulators generating friction. A stop consonant differs from a fricative sound because occlusion is total in a stop sound rather than partial.

Table 9

Voicing Contrast of Haryanvi Fricatives.

Phonemes			**Voiceless**		**Voiced**	
f	vs	v	fən	(skill)	vɑʤ	(sound)
			sɑfɑ	(bandana)	ɦərjɑnvi	(language)
			berəf	(ice)	------	

Table 10

Word Level Distribution of Haryanvi Fricatives.

Phoneme	**Initial**		**Medial**		**Final**	
f	fəvɑrə	(fountain)	məfʊʤ	(protect)	sɑːf	(clean)
v	vɑ	(that)	lʰəsvɑ	(gum berry)	------	
s	sɑndʰ	(bull)	bɑsən̪	(utensils)	sɑːs	(mother in law)
ʃ	ʃiːɑmi	(nearby)	bɑʃən̪	(speech)	------	
ɦ	ɦəʤɑr	(thousand)	bɑɦi	(farming)	------	

According to **table 2**, Haryanvi has five fricatives articulated from four places of articulation: Labio-dental /f, v/, alveolar /s/, palatal / ʃ / and glottal / ɦ/. **Table 9** points out that voicing contrast exists only at one place of articulation namely labio-dental /f, v/ whereas alveolar /s/, palatal / ʃ / and glottal / ɦ/ do not have voicing contrast. This indicates that Haryanvi has four voiced fricatives /v, s, ʃ, ɦ/ while one voiceless fricative /f/. **Table**

10 reveals that labio-dental /f/ and alveolar /s/ occur at all position in Haryanvi namely word initially, word medially and word finally. However, the word level distribution of labio-dental /v/ and glottal /ɦ/ are restricted to words initial and medial positions.

4.2.4 Affricates

Affricates are hybrid consonants which consist of a stop and fricative. Catford (Catford, 2001) argues tha affricate consonant sounds begin as stops (sounds with full blockage of the vocal tract) and conclude as fricatives (sounds with partial obstruction of vocal tract causing friction). An affricate sound involves rapid transition from a condition of completely blocked airflow to a situation of partially obstructed which causes turbulent airflow. Furthermore, affricates like stops involve closure phase and release phase. The nature of release is the difference between them. As far as the stops are concerned, the active articulators are lowered fast to allow a sudden air explosion while for affricates the active articulators remain close to the passive articulators causing friction as the airflow passes through the articulators (Hussain, 2010).

Table 11

Voicing Contrast of Haryanvi Affricates.

Phonemes			**Voiceless**		**Voiced**	
ʧ	vs	ʤ	tʃi:lʰ	(vulture)	ʤindəgi	(life)
			rəʧna	(heroic couplet)	mərdʒi	(will)
			naʧ	(dance)	kagədʒ	(paper)
ʧʰ	vs	ʤʰ	tʃʰo:ra:	(boy)	ʤʰadʒ	(aero-plane)
			pənʧʰi:	(bird)	ʤʰʊla	(cotton bag)
			tʃʰa:l	(tree skin)	godʒʰ	(pocket)

Table 12

Aspiration Contrast of Haryanvi Affricates.

Phonemes			**Un-aspirated**	**Aspirated**
ʧ	vs	ʧʰ	tʃoːn (flour)	tʃʰɑːl (tree skin)
			ʧʌnʧək (suddenly)	pɑʧʰeː (back, behind)
			kʌnʧ (glass)	ʧʰɑʧʰ (yogurt shake)
ʤ	vs	ʤʰ	ʤɑpɑ (forty days after child birth)	ʤʰʊla (bag)
			bəʤɑr (bazaar)	goʤʰi (pocket)
			vɑʤ (sound)	boʤʰ (burden)

Table 13

Word Level Distribution of Haryanvi Affricates.

Phoneme	**Initial**	**Medial**	**Final**
ʧ	tʃiləm (fire container)	ʧʌnʧək (suddenly)	nɑʧ (dance)
ʧʰ	tʃʰoːtɑ (small)	pənʧʰiː (bird)	ʧʰɑʧʰ (yogurt shake)
ʤ	ʤərʊr (necessary)	bəʤɑr (bazaar)	bɑʤ (run)
ʤʰ	ʤʰuːɭɑ (swing)	goʤʰi (pocket) boʤʰ (burden)	

According to **table 2**, there are four affricates in Haryanvi namely voiceless palatal /ʧ/, voiceless palatal /ʧʰ/, voiced palatal /ʤ/ and voiced palatal /ʤʰ/. All four are produced using only palatal region. **Table 11** ascertains that both un-aspirated /ʧ, ʤ/ and aspirated / ʧʰ, ʤʰ/ Haryanvi affricates exhibit voicing contrast and have counterparts. Word level distribution of Haryanvi affricates in **table 13** shows that all four affricates occur in all positions (i.e. word initially, word medially and word finally).

4.2.5 Liquids

Liquid is term used for a number of laterals and rhotics (‘l’ and ‘r’ sounds) in the world languages (Chambers & Trudgill, 1998). They add that the liquids are articulated with unobstructed flow of air but however involve some sort of blockage in oral tract. Moreover according to Dickey (Dickey, 1997), liquid consonants are produced when tongue approaches the point of articulation in the mouth but it does not move near enough to constrict or obstruct the airflow for creating turbulence (as in the case of fricatives).

Contrary to nasals, the airflow is not redirected to nose and the flow of air is permitted to escape through mouth but the direction of airflow is modified by tongue towards sides of the mouth before exiting via lips. The particular sound of each liquid consonant is influenced by the tongue position and the manner in which exhaling air stream is navigated around it. There are lateral and non-lateral liquids. The flow of air is directed toward sides of the mouth for laterals whereas airflow is affected but still directed forward for non-laterals. Liquids are voiced and sonorants.

4.2.5.1 Laterals

Lateral consonants are produced when air stream flows out of mouth along the sides of tongue instead of middle part. To articulate a lateral consonant sound, the tip of the tongue is against the roof of mouth that blocks the air from passing in the middle part of the mouth and air stream is directed to pass from one or both sides of the tongue (Clark et al., 2007).

Table 14

Aspiration Contrast of Haryanvi Liquids (Laterals).

Phonemes			**Un-aspirated**			**Aspirated**	
l	vs	lʰ	lɑdu:	(sweet)		lʰəsvɑ	(gum berry)
			gʊlsər	(comon myna)		------	
		gɐ:l	(accompany)		tʃi:lʰ	(vulture)	
ɭ	vs	ɭʰ	------			-------	
		ʈɑɭi	(key)		------		
			------			sɑɭʰ	(cottage)

Table 15

Word Level Distribution of Haryanvi Laterals.

Phoneme	**Initial**			**Medial**		**Final**
l (accompany)	ləʈɑ	(clothes)	li:lɑ	(blue)	gɐ:l	
lʰ	lʰɑs	(corpse)	------		tʃi:lʰ	(vulture)
ɭ	------			nəʊlɑ (mongoose)		------
ɭʰ (beehive)	------			-------		mɑɭʰ

Table 2 shows that there are four lateral consonants in Haryanvi. All laterals i.e. alveolar un-aspirated lateral /l/, alveolar aspirated lateral /lʰ/, retroflex un-aspirated lateral /ɭ/ and retroflex aspirated lateral /ɭʰ/ are voiced. In Haryanvi, **tables 14 and 15** present that alveolar un-aspirated lateral /l/ appears word initially, word medially and word finally at all positions in a word while alveolar aspirated lateral /lʰ/ occurs at initial and final positions and does not come in the mid of the word. Furthermore, retroflex un-aspirated lateral /ɭ/ and retroflex aspirated lateral /ɭʰ/ only appear word medially and word finally respectively.

4.2.5.2 Rhotics

Rhotic is a general term used for a variety of consonant sounds like trills, taps and flaps. According to Clark (Clark et al., 2007), trills are produced when an articulator such as uvula, tongue and lips, comes close together another articulator and it vibrates due to interruption in airstream. They may be produced with one or more contacts between articulators but generally articulated with two to three contacts or even they may be up to 5 or more than if geminate. Tap is articulated by a single brief contact between tip of tongue and alveolar ridge whereas a flap is produced to curl tip and blade of tongue back for touching hard palate and then it returns to its resting position (Catford, 2001). Many linguists consider flaps and taps identical and use these terms indiscriminately while other distinguish them. A tap is distinguished from the flap that it strikes its contact point directly whereas a flap strikes the contact point tangentially.

Table 16

Aspiration Contrast of Haryanvi Liquids (Trills).

Phonemes			**Un-aspirated**			**Aspirated**
r	vs	rʰ	rəŋ	(colour)	rʰeit	(well)
		mərʤi	(will)		------	
			ʤərʊr	(necessary)		------

Table 17

Word Level Distribution of Haryanvi Trills.

Phoneme	Initial		Medial	Final
r (line)	rən	(field)	ɦərjɑnvi (language)	lɑr
r^h	r^heit	(well)	------	------

Table 2 indicates that Haryanvi has two trill consonant sounds: alveolar un-aspirated /r/ and alveolar aspirated /r^h/. Both trills in Haryanvi are voiced. It is indicated in **tables 16 and 17** that alveolar un-aspirated /r/ occurs word initially, word medially and word finally but alveolar aspirated /r^h/ only appears word initially. Moreover, alveolar un-aspirated /r/ in Haryanvi is articulated when blade of the tongue vibrates repeatedly against alveolar ridge [39]. It is rhotic because it is pronounced in all contexts. It is pronounced in prevocalic position [rəɳ] 'field' and postvocalic [ʤərʊr], 'necessary'.

Table 18

Aspiration Contrast of Haryanvi Liquids (Flaps).

Phonemes			Un-aspirated		Aspirated
ɽ	vs	$ɽ^h$	------		------
			nɑɽɑ:	(drawstring)	------
			lɑ:kəɽ	(wood)	kɑ:$ɽ^h$ (boil

Table 19

Word Level Distribution of Haryanvi Flaps.

Phoneme	Initial	Medial		Final
ɽ (turn)	------	ʈɑ:kəɽ	(huge scales)	mo:ɽ
$ɽ^h$ (boil)	------	------		kɑ:$ɽ^h$

Table 2 demonstrates that two flap consonant sounds are found in Haryanvi. They are: retroflex un-aspirated /ɽ/ and retroflex aspirated /$ɽ^h$/. Both the flaps are voiced. According to **tables 18 and 19**, retroflex un-aspirated /ɽ/ appears word medially and word finally and retroflex aspirated /$ɽ^h$/ occurs only word finally.

4.2.6 Glides

Glides are a kind of the approximants. A glide consonant is articulated when tongue approaches the articulation point in the mouth but it does not come near enough to constrict or block the airflow for creating turbulence (Clark et al., 2007). Davenport & Hannahs [39] opine that the production of the glide consonants, active articulators come near the passive articulators and they glide away gradually instead of having contact. Glide sounds are more like vowels rather than consonants because there is no connection between articulators but they behave like consonants as glides do not make nuclei of the syllable. Glides are also called semivowels because they are phonetically identical to vowel sounds but function as consonant in syllable structure. The basic distinction between liquids and glides is that the tip of the tongue is used in producing a liquid sound whereas the body of the tongue and not its tip is raised for the glides.

Table 20

Haryanvi Glides.

	j	vs	v		jo:	(this)	vɑ	(that)
					gijɑn	(understanding)	gɑvei (sing)	
					------		------	

Table 21

Word Level Distribution of Haryanvi Glides.

Phoneme	Initial		Medial	Final
j	jɑ:r	(friend)	ɦərjɑnvi (language)	------

The tables 20 and 21 illustrate that there is only one glide /j/ consonant in Haryanvi. It is palatal voiced and appears word initially and word medially.

5 CONCLUSION

This study aims to identify, and document Haryanvi's consonantal phonemic inventory. This aim has been effectuated by identifying and developing a Haryanvi consonantal inventory after extensive phonemic analysis incorporating minimal pairs,

voicing and aspiration contrast and word level distribution of sounds initially, medially and finally. The study substantiates forty Haryanvi consonants, such as 16 stops /p, pʰ, b, bʰ, ʈ, ʈʰ, ɖ, ɖʰ, t, tʰ, d, dʰ, k, kʰ, g, gʰ/, six nasals /m, mʰ, n, nʰ, ɳ, ŋ /, five fricatives /f, v, s, ʃ, ɦ/, four affricates /tʃ, tʃʰ, ʤ, ʤʰ/, four laterals /l, lʰ, ɭ, ɭʰ/, two trills /r, rʰ/, two flaps /ɽ, ɽʰ/ and one glide /j/. These phonemes are produced from eight articulation places: bilabial /p, pʰ, b, bʰ, m, mʰ/, labio-dental /f, v/, dental /ʈ, ʈʰ, ɖ, ɖʰ/, alveolar /t, tʰ, d, dʰ, n, nʰ, s, l, lʰ, r, rʰ/, retroflex /ɳ, ɭ, ɭʰ, ɽ, ɽʰ/, palatal /ʃ, tʃ, tʃʰ, ʤ, ʤʰ, j/, velar /k, kʰ, g, gʰ, ŋ/, and glottal /ɦ/. The number of un-aspirated consonants /p, b, ʈ, ɖ, t, d, k, g, m, n, ɳ, ŋ, f, v, s, ʃ, ɦ, tʃ, ʤ, l, ɭ, r, ɽ, j/ is twenty-four where the number of aspirated consonants /pʰ, bʰ, ʈʰ, ɖʰ, tʰ, dʰ, kʰ, gʰ, mʰ, nʰ, tʃʰ, ʤʰ, lʰ, ɭʰ, rʰ, ɽʰ/ is sixteen. This study has identified eleven voiceless consonant phonemes /p, ʈ, t, k, f, ʧ, pʰ, ʈʰ, tʰ, kʰ, ʧʰ/ and twenty-nine voiced consonant phonemes /b, bʰ, ɖ, ɖʰ, d, dʰ, g, gʰ, m, mʰ, n, nʰ, ɳ, ŋ, v, s, ʃ, ɦ, ʤ, ʤʰ, l, lʰ, ɭ, ɭʰ, r, rʰ, ɽ, ɽʰ, j/ in Pak Haryanvi. Four-way voicing-aspiration contrast (voiceless un-aspirated, voiceless aspirated, voiced un-aspirated, voiced aspirated) is established in Haryanvi. Like Urdu and Punjabi, Haryanvi also have aspirated voiced consonants. There are six voiceless un-aspirated /p, ʈ, t, k, f, ʧ/, five voiceless aspirated /pʰ, ʈʰ, tʰ, kʰ, ʧʰ /, eighteen voiced un-aspirated /b, ɖ, d, g, m, n, ɳ, ŋ, v, s, ʃ, ɦ, ʤ, l, ɭ, r, ɽ, j/, eleven voiced aspirated /bʰ, ɖʰ, dʰ, gʰ, mʰ, nʰ, ʤʰ, lʰ, ɭʰ, rʰ, ɽʰ/ consonants in Haryanvi phonemic inventory.

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All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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