

An Exploration of Code-Mixing Types: A Study of Doctor-Patient Interaction

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Abstract

Communication between doctors and patients plays a crucial role in ensuring effective diagnosis, treatment, and patient satisfaction. In multilingual societies such as Pakistan, interactions in healthcare settings frequently involve the mixing of languages, particularly Urdu and English. This study explores the phenomenon of code-mixing in doctor-patient conversations and examines the types and motivations behind its use. Adopting a qualitative research approach, the study analyzes ten audio-recorded interactions between doctors and patients at the Pakistan Institute of Medical Sciences (PIMS), Islamabad. The conversations were transcribed and examined using Muysken's (2000) typology of code-mixing, which includes insertion, alternation, and congruent lexicalization. The findings reveal that insertion is the most dominant form of code-mixing in medical discourse, followed by alternation and congruent lexicalization. The analysis further shows that code-mixing occurs due to several communicative motivations, including discussing specific medical topics, lexical gaps, emphasis, clarification, and group identity. The study highlights that code-mixing often facilitates communication in bilingual medical settings, although it may also influence patient comprehension depending on linguistic familiarity. By providing a sociolinguistic perspective on healthcare communication, this research contributes to a better understanding of language practices in medical discourse and emphasizes the importance of effective linguistic strategies in doctor-patient interactions.

Keywords: Code-mixing, Doctor-patient communication, Sociolinguistics, Bilingual discourse, Medical interaction, Urdu-English language mixing, Healthcare communication

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Introduction

For society understanding language is considered pivotal element, both language and society go side by side and cannot be separated as each has considerable impact on other. When they are in contact both have impact on each other therefore change and variation in language is very natural process. Nowadays in multilingual society almost everybody uses two or more than two languages as their communication tool, which they use according to its context and situation. Due to the increased number of bilinguals and multilingual in a community, people often mix or switch between two or more languages. According to Holmes (1992) the phenomena of mixing or switching languages is known as code mixing and code switching.

Hudson (1996) says that the phenomenon of code-mixing occurs when a fluent bilingual speaker in a conversation changes his language within a sentence, without making a change in the situation. The speaker alternates between two languages in a single situation. Muysken (2000) proposes three types of code mixing as 1) insertion, which occurs due to the incorporation of lexical items from one language to another. 2) Alternation, this type of code mixing occurs with the alternation of structures both on the lexical and grammatical level, between two languages. 3) Congruent lexicalization is the shared grammatical structure of two languages, which consists of lexical elements of either language. The functions of code mixing include the fact of speaker's fluency and strong hold on the second language. Along with the sign of speaker's identity, it measures the speaker's language attitude towards second language. This language attitude gives the chance to speaker to opt between the good and bad choice of language to use.

The conversation between a healthcare specialist and his patient can be successful after the exchange of correct information between both parties. The use of language in the conversation of healthcare setting is considered to be exceptionally essential. It is important to know that how can code-mixing in a bilingual setting influence the conversation between doctor and patient.

This paper proposes a sociolinguistic analysis of the communication between doctor and patient by looking at the pragmatic features of the code mixing by both the parties.

Effective doctor–patient interaction is essential for accurate diagnosis, patient understanding, and informed decision-making. However, in many multilingual healthcare settings, doctors often engage in code-mixing, especially when incorporating medical jargon into everyday conversation. While code-mixing can help simplify complex concepts, it may also create confusion, reduce patient comprehension, and hinder the quality of communication. Despite its significance, limited research has systematically explored the types of code-mixing used in doctor–patient interactions and how medical terminology contributes to communication barriers or facilitation. Therefore, this study seeks to investigate the different forms of code-mixing employed by doctors, examine the role of medical jargon within these linguistic shifts, and determine the extent to which such practices affect patient understanding and overall communication effectiveness.

❖ **Significance of the research**

A successful encounter between healthcare providers and patients is essential to provide the patients high quality healthcare. However, due to the lack of awareness in effective communication and training for communication skill by healthcare providers, the patients usually remain unsatisfied in such medical encounters.

This paper centers on the encounters between doctor and their patients in the healthcare setting, and offers a sociolinguistic insight of these conversations. The research focuses on the pragmatic features, the motivation behind code-mixing and its function. On the other hand, the paper helps to increase awareness of linguistic, sociolinguistic and its understanding in the context of healthcare encounters in Pakistani hospitals.

Moreover, this research is very significant because it contributes to a deeper understanding of how language functions in real-life professional interactions, particularly within healthcare settings. By exploring the types of code-mixing and the reasons behind its use in doctor–patient encounters, the study highlights the crucial role of language in effective communication. The findings can help identify how linguistic choices influence patient comprehension, satisfaction, and trust, especially in contexts where multilingual communication is common.

Additionally, the research offers valuable insights for medical practitioners, educators, and policymakers by showing how language practices can either support or hinder the delivery of healthcare. It can inform communication training for

doctors, encourage more patient-centered language use, and help develop guidelines for clearer medical explanations. From an academic perspective, the study contributes to sociolinguistics and applied linguistics by expanding current knowledge on code-mixing in institutional discourse.

Overall, this research strengthens both theoretical understanding and practical communication strategies, ultimately helping to improve the quality of healthcare interaction and patient outcomes.

❖ **Delimitation**

Ten interactions are sampled from ten audio recorded doctor and patient encounters in the selected government owned hospital in Islamabad, Pakistan.

Review of the Literature

A language is a means of communication and interaction between people within a society. Sociolinguistics is the study of variation of language. According to Holmes (1992) sociolinguistics deals with the relation of language with the society, it is concerned with the language spoken in different social contexts and to identify its role and function in that context. It deals with the problems related to the social body its use and attitude of its speakers.

According to Hymes (1974) Sociolinguistics can deal with the discipline related to social life by using and analyzing linguistic data. Trudgil (1974) says that Sociolinguistics is a branch of linguistics which deals with the language as a social and cultural tool. Language is not only viewed as a social tool but also as cultural tool. Since every society has its own certain values and cultures that in socio linguistics the language related to cultures is still under discussion. Humans as a social being are always committed to a group of people called as a community. A community has its own certain characteristics that include the way they communicate with each other, which is known as speech community. According to Bloomfield (1933) in a speech community people interact with each other through speaking, and usually they share the same linguistic features and understanding of different language varieties within their community. A speech community can be defined as a group of people who interact with another and share some social and certain speech characteristics of their interest.

According to Gumperz (1971) language in a speech community can be analyzed both with the reference of language itself and a wider context of their social behavior. Any individual's ability to use more than one language variety can be referred as bilingualism. Trudgill (2003) stated that an individual's ability to speak two or more than two languages is called bilingualism. There are many countries who can speak two or more than two languages and they are called as bilinguals or multilingual. Pakistan is one of the countries in the world where people can speak more than two languages; it has a large number of bilinguals and multi-linguals. Societies are often multilinguals because their members interact with each other using more than one language in their daily communication.

Language is the main means of communication among people the speakers usually use more than one language along with their base language that's why bilingualism and multilingualism has become very common in them. According to the statement of Brown and Attardo (2000) the speakers who have the good knowledge of the varieties and dialects of their native language can be considered as bilinguals. According to Wardhaugh (1994) this kind of bilingualism is acquired naturally by speakers, and they can shift from one language variety or dialect to another without hesitation or pauses.

According to Wardhaugh (1994) a dialect or a language that someone chooses or a communication system between any groups is known as code, and the system of language which carries its specific characteristics reflects the context of the speaker can be called as code. Code mixing is usually as the result of interaction between the members of bilingual or multilingual society, it happens when the speaker uses two languages and switch between those two languages in a single utterance. Code mixing is the means of expression and conversation which is the combination of two or more languages and dialects of language. For example, when the speaker switches between English and Punjabi or Saraiki dialect, this can be both the demand of the conversation or as a part of the habit of the speaker.

Muysken (2000) says that Code Mixing can be further divided into following types, Insertion: It can be the insertion or the use of lexical items or constituents of a different language into the sentences of the language which is actually the main means of communication. For example: "Muje Judge saab se insaaf ki umeed hain" here judge is an English word which is used in Urdu utterance".

Alternation: the alternation code mixing happens when the speaker switches between the structures of two different languages. (Grosjean, 1982; Pennington, 1995)

Congruent lexicalization: it is the lexicalization of structures from a different lexical background; however, they do share some grammatical structures. For example, it happens when the speaker switches between the dialects of the same language.

Chaer and Agustina (1995) explains the forms of code mixing as following:

Word is the basic element in any sentence that can be moved around a sentence without destroying its grammatical structure (Cruse, 1991). For example, “Mujhe tumhare result se mayusi hui” here Result is an English word which is mixed with Urdu language. A single isolated word usually fails to give a meaning; hence a phrase can be considered as a unit of meaning in any language in use, this unit consists of at least a few words combined together to give a meaningful expression.

For example, “Let’s see agar mujhe time mila...” here Let’s See is an English Phrase mixed with Urdu Language.

Code Mixing happens for a number of reasons, Wardhaugh (1995) cites Hymes (1975) Speaking Model as different factors,

- S: refers to the social, physical and psychological background of speakers in a conversation
- P: refers to the speaker and both the listener with reference to their social, and psychological background
- E: refers to the ends, it is the goal of the conversation intended by the participants
- A: it refers to the message content which is the act sequence. These contents in terms of Pragmatics are named as illocutionary, perlocutionary and locutionary
- K: it is the key in a conversation, key refers to the attitude and tone of the speaker, this tone can be serious or casual etc.
- I: it is the instrumentalities of the conversation; it refers to the form of the conversation for example if it is taking place through radio, television, or in a written text etc.

- N: refers to the norms, it can be the norms of politeness or softness in a conversation
- G: it refers to the genre or type of the conversation. For example if it is a class lecture, a daily conversation or a religious sermon

Wardhaugh (1992) mentions the factors that influence the language choice, according to him the language choice; participants and the social distance between the participants can influence their language choice. According to Hoffman (1991) there are several reasons which motivate a speaker for code mixing in a conversation these reasons include,

- Sometimes a speaker feels to be more comfortable and convenient to express himself in a language while talking about a particular topic, for that reason the speaker chooses his language according to his preference in his utterances
- Sometimes a speaker intends to quote or share a famous saying which is in a language other than his native language, that's why the speaker switches between the two languages he has mastered in, or inserts a part of that saying in his utterance
- Code mixing can be due to the reason that a speaker might want to be emphatic about something, so in order to put that stress in his statement he intentionally or unintentionally switches between languages
- Another reason for code mixing among bilinguals and multilingual is the unintentional use of interjection and connectors by speakers
- Sometimes bilinguals convey the same message to make it more clear for his listener, he starts his statement in one language and switches into another language in the second half of his statement conveying the same message
- a frequent use of code mixing by the speakers can be for the reason to make their statement clear, smooth and more comprehensible where the speaker inserts words from other language into his statements
- the process of code mixing can be for the reason of group identity as well, sometimes it includes the insertion of jargons which is the language of a particular group of people sharing some common interests.

There are some specific terms and language codes which are closed-ended and can be understood by the members of that specific group only, these terms and codes are special and used in the context of the participants of that specific group. Fromkin

(2011) defines jargon as special terms, familiar to the members of the same group and profession. Therefore, jargons are the special terms and phrases that are used by the members of a particular occupational group, and which is difficult to understand by the people outside of that group.

Every life scope has its own jargons. Linguistics jargons are Phonemes, morphology and semantics. The term “greeting” in restaurant means the waiters greeting their customers and guiding them towards their seat. It is used to shorten a long explanation and as a solidarity tool for the members of a certain group.

Jargons are usually classified into five kinds. The collocation jargon is used widely both in formal and non-formal situation. Criminal jargons are used with reference to criminal activities. Jargon used by the employees in a particular profession to make their communication easy with their colleagues, is known as occupational jargon. There are jargons which are derived from basic words and produce new meanings, are called as obscenities jargon. Adolescence jargon is mostly used by the young people usually aged 14 to 25.

The factors and motives behind the use of jargons in daily communication may include the situational factors for example time, the topic of conversation, and the place of conversation has an influence on the use of jargons. Several studies have been committed related to code mixing, Code Mixing and Code Switching in Speaking Class is the study carried by Endah Kusrawati (2010). In this study the writer tries to find out the factors that influence or motivates the students for code switching and code mixing in the classroom. The writer at the end of the research finds out this code mixing and code switching to be a problem for students in their speaking class.

A study Communication Barriers in Medical Setting: A Sociolinguistic Analysis of Doctor Patient Medical Discourse conducted by Ejaz Mirza (2016) aims to describe the status of medical discourse in doctor and patient. The researcher has conducted his study in a government hospital of Rawalpindi District. The researcher finds that health awareness and literacy of patients, lack of communication skills in doctors, and the poor listening comprehension as a barrier in the communication between doctor and patient.

The second study is conducted by Taufik Jibrán (2010) entitled as Code Mixing in the Advertisement in Radio Civica FM. The study concludes that the speakers often do not use one variety of language, code mixing can be as a factor for the competency of the advertisements, and the code mixing does not affect the meaning and message conveyed by these advertisements.

In another study entitled as A Study of Code-Mixing Phenomena in Nyai H Ainur Rohmah's Preach, conducted by Eli Ermawati (2004), concludes that regional, national and foreign languages including English and Arabic were found in the preach, hence the phenomenon of code mixing occurs mostly in the formal settings. The researcher has used qualitative method and has applied Suwito's theory for the analysis of forms of this code mixing.

These related studies have made significant contributions in the field of sociolinguistics and the practice of code mixing in bilingualism which is similar to the researcher's field of research. The related studies differ from the present article as Ejaz Mirza discovers the communication barriers between doctors and patients, Kusnawati discusses about the code switching and code mixing occurred in the classrooms and identifies the motivational factors behind code mixing and code switching, the study carried by Taufik Jibrán aims to find out the influence of code mixing on the messages conveyed by advertisements, while Eli Ermawati focuses on the forms of code mixing. None of the above studies talks about the phenomenon of code mixing in the healthcare context, the current research closes this vacuum by examining code mixing employed in different meetings of doctor and patients in Pakistani hospital and the social factors behind the use of these codes.

Methodology

The method of qualitative research analyzes a problem without involving a numeric data. According to Bodgan and Biklen (1982) qualitative method includes the researcher's strategies with specific characteristics. The researcher has adopted qualitative method for this paper to explore the types of code mixing, and the social factors as motivation behind this code mixing and medical jargons in the exchange of utterances between doctor and patient. The researcher has selected doctor and patients from the Pakistan Institutes of Medical Sciences as the population of this research.

The researcher records randomly ten encounters between doctor and patient in selected government owned hospital Pakistan Institutes of Medical Sciences. The audio recorded conversations are a mix bag of interactions in different meetings in the hospital. After the recordings are being transcribed, the conversations which contain the elements of code mixing are arranged by the researcher accordingly. These conversations are then classified according to the theory of code mixing proposed by Peter Muysken (2000).

Data Analysis

❖ Analysis of Data 1

Doctor: “acha kia hogaya hain”?

Patient: “6 din se yaha pain horaha hain, khaansi nahi rukh rahi”.

Doctor: “khaansi khud bakhud aa jati hain”?

Patient: “wo actually khud hoti hain lekin bohot pain hota hain, chest main pressure bhi hain aur...”

Doctor: “zor se saans lo”

In the above conversation the researcher has found the process of code mixing done by patient in his utterances. The patient while describing his problem to the doctor uses English words such as “pain”, “actually”, “chest”, and “pressure”. In his first sentence patient inserts English noun “pain” in his Urdu utterance, in the same way in the second utterance of patient the English adverb “actually”, and nouns “chest and pressure” are embedded into overall structure of Urdu, this pattern of code mixing is known as Insertion according to the definition proposed by Muysken (2000).

The researcher has identified reasons behind the process of code mixing by patient in above conversation as “talking about a particular topic” proposed by Hoffman (1991). Where a bilingual speaker chooses his code between two languages according to his convenience. In this situation the excessive use of code-mixed language by patient shows that while describing his problem to the doctor he is more comfortable and expressive by inserting English words into his Urdu utterances.

❖ Analysis of Data 2

Patient:” aap ne jo medicines di thi, us main mera jo flue tha na, aur jo pain hota tha

naak ki haddi main, bilkul sab kuch tik hogaya tha, bich main, main ne thanda dhood pina shuru kia tho....”

Doctor: “dhood piyo lekin thanda na piyo, dhood se kuch nahi hota, lekin thanday garam se problem ho jati hain”.

In the above data, taken from a conversation between doctor and patient, the researcher has observed the process of code mixing done by both the physician and his patient. In the first utterance of above conversation the English plural noun “medicines”, the noun “flue and pain” are inserted in the Urdu utterance and in the same way in the second utterance by physician the English noun “problem” is embedded in the Urdu structure of the sentence. This process of code mixing is an example of insertion pattern, as according to Muysken (2000) in this pattern of code mixing there is embedding which involves one lexical unit, and in these two utterances that lexical unit is noun which is embedded into the overall structure of Urdu utterance.

In the first utterance of above conversation speaker inserts three English words into his Urdu utterance, this process of code mixing indicates the reason “talking about a particular topic” it shows that the speaker prefers to talk about his problem in English which is his second language.

According to Hoffman (1991) sometimes speakers like to express their thoughts in their second language rather than their native language because they feel more comfortable and expressive in that language.

❖ Analysis of Data 3

Doctor: “raat ke khanay main kia khaya tha”?

Patient: “chicken khaya tha”

Doctor: “chicken... Drip-ay laga di thi na aap ne”?

Patient: “Ji Ji”

From the above data taken from a conversation between Doctor and his patient the researcher has found the process of code mixing in the first utterance of patient, where she replies the question with the insertion of English word “chicken”. This is an instance of insertion pattern according to the definition of Muysken (2000), in this utterance the English noun “chicken” is embedded with the structure of Urdu utterance. The researcher has observed another process of code mixing in an

utterance of Doctor, which is an example of congruent lexicalization. According to the definition proposed by Muysken (2000) congruent lexicalization happens in a situation between two languages who share grammatical structures, where lexical elements are shared by either language. In an utterance from above data doctor has inserted the word “drip” which belongs to lexical class of noun in English, and “-ay” is an affixation in Urdu which can be attached with the noun as a modifier. Here “-ay” is attached with noun “drip” to form the plural noun as ‘drip-ay’ The reason for process of code mixing occurred in above conversation is “because of real lexical need”. In the above utterance by doctor he uses an English word “drip” which is also a medical jargon. The fact that word “drip” lacks an equivalent word in Urdu triggered doctor to code mix and insert an English word in his Urdu utterance, because he was unable to place a suitable word for “drip” in his first language Urdu.

❖ Analysis of Data 4

Doctor: “is waqt chakkar tho nahi aarahe”?

Patient: “nahi”

Doctor: “kisi dawai se allergy tho nahi hoti”?

Patient: “nahi”

From the above conversation between doctor and his patient, the pattern of code mixing found by researcher is, insertion. In an utterance by doctor the noun from English language “allergy” has taken place of its Urdu equivalent. Here the English word “allergy” is inserted in the structure of Urdu utterance. The reason for code mixing in above conversation for real lexical need. A common reason for the process of code mixing is real lexical need which was proposed by Hoffman (1991) according to him when a bilingual speaker is unable to find a suitable replacement for a word in his native language, he uses the word from second language. In the above utterance doctor uses the word “allergy” which is frequently used in medical context, although the word “allergy” has an equivalent in Urdu language but that is not used very often that’s why the speaker prefers to use the English word in his utterance.

❖ Analysis of Data 5

Patient: “I mean do I need ke main ye goliyan rozana le lun”?

Doctor: “nahi nahi, aap sirf zarurat parne par le, tik hain na”?

In the above data taken from a conversation between doctor and his patient, the researcher has identified the process of code mixing as alternation. In above

utterance the patient uses two languages Urdu and English where she covers first half of the utterance with English and the second half with Urdu, here both of the languages have been uttered alternately each with their structure.

In above conversation the reason behind process of code mixing identified by researcher is, “being emphatic about something” here the speaker has switched from English to Urdu because she felt much more convenient in her native language to be emphatic rather than in English. This code switching of English to Urdu language is an unintentional act done by speaker.

❖ Analysis of Data 6

Doctor: “aap pehle ye injection lagwa ke aye? khaansi bhi karte hain”?

Patient: “doctor saab, aap mujhe koi goli de de, injection-o se mujhe bada darr lagta hain”

In the above utterances the researcher has found out the process of code mixing as congruent lexicalization, where the patient has inserted English word “injection” with an affixation of “-o” in her Urdu utterance. “-o” is an affixation in Urdu language which is attached to form the plural of a noun. Here the patient has attached an Urdu affixation with a noun from English language which can modify with noun so that to form the plural of word “injection” In this conversation the researcher has identified reason behind code mixing by speakers as “group identity”. In first utterance by doctor he inserts the word “injection” which is a common and usual word used in medical context, while replying to him the second speaker of conversation who is a patient inserts the pattern of congruent lexicalization “injection-o” to express group identity.

❖ Analysis of Data 7

Patient: “raat 2 baje neend aati hain..pura mahina hogaya hain daily goli kha rahi hun”

Doctor: “phir tho definitely neend disturb hogi”

The researcher has identified the process of code mixing as insertion in the above data, taken from a conversation between doctor and his patient. According to Muysken (2000) the pattern of insertion occurs when lexical elements from one language are being inserted into the structure of another language. In the above conversation “daily” is an adverb from English language which is embedded into the

Urdu utterance by patient. In the same way replying to his patient the doctor uses an English verb “disturb” in the structure of his Urdu utterance.

In this conversation the process of code mixing has taken place due to the reason of being emphatic by speaker, here the speaker inserts English word “definitely” to give stress and emphasis to his statement. As proposed by Hoffman (1991) when a bilingual speaker intends to be emphatic about something he intentionally or unintentionally switches between two languages.

❖ Analysis of Data 8

Doctor: “qabz hain, kitne din se”?

Patient: “it’s been almost twenty days taqriban 20 din ho gaye hain, ke har do din ke baad qabz hojata hain”

In the above data from a conversation between a doctor and his patient, the researcher has identified the process of code mixing as alternation. In the above utterance patient started her statement with English and switched into Urdu in the second half of her statement. In the above instance in a single statement the grammar of both the languages English and Urdu is involved but none of them alone constructs the frame of the statement.

The reason behind code mixing in above conversation is that the speaker wants to clarify her statement. In this conversation speaker starts her utterance with English and switches into her native language in the second half of her utterance. The speaker conveys same message in both parts of her utterance in two languages which she has mastered in just to make her statement clearer and more understandable for her listener.

❖ Analysis of Data 9

Patient: “meri khaansi bilkul bhi kam nahi hui hain, aap koi aur dawai likh de mujhe”

Doctor: “acha aap zara patient tho rahe, 3 din aur yahi dawai jaari rake”

The researcher has identified the pattern of code mixing as insertion in the above conversation. Insertion according to Muysken (2000) is the embedding of a lexical item in the form of word or a phrase, into the structure of another language. In the conversation above an adjective “patient” from English language has been inserted into the Urdu utterance. The speaker has identified reason for above code mixing as

“talking about a particular topic”. In the above conversation the speaker who is a doctor is used to and habitual of code mixing between English and Urdu, he is more comfortable inserting English words into his Urdu utterances because in medical context the speakers are intended to insert words from their second language and the process of code mixing is a very usual act among them. Here the speaker has also inserted the word “patient” because he is more comfortable to code mix freely during his utterances.

❖ Analysis of Data 10

Doctor: “thora khanay main zara ehtyat kare tik hain? Cold drink peetay hain”?

Patient: “nahi nahi”

Doctor: bas ehtyat kare, pareshani ki koi baat nahi, test saare clear hain, tik hain na?

The researcher has identified the type of code mixing as insertion in the above conversation. According to Muysken (2000) insertion involves the embedding of lexical items from one language into another. In the above utterance an English noun “cold drink” has been embedded into an overall structure of Urdu utterance. In the same way “test” and “clear” are another example of insertion where these two English words are inserted into the Urdu statement of Doctor in the above conversation.

In this conversation the reason for code mixing identified by researcher is, “because of real lexical need”. Here the speaker has inserted words “cold drink” and “test” because he did not find a suitable replacement in his native language. That’s why the speaker found it easier to insert these words into his Urdu utterance.

Conclusion

By referring to the previous section of Data Analysis there are ten utterances of Urdu and English language taken from recorded conversation between doctor and patient in Pakistan Institute of Medical Sciences, these utterances were classified into three patterns of code mixing (insertion, alternation and congruent lexicalization) proposed by Muysken (2000). As a result of analysis of above data, the researcher has concluded that; seven instances of code mixing from above data fall into category of insertion the two process of code mixing belong to alternation. Two instances refer to the type congruent lexicalization. The researcher has further analyzed the reasons behind process of code mixing by speakers. These are the seven

reasons based on theory proposed by Hoffman (1991), code mixing when talking about any particular topic, code mixing when quoting someone else' saying, code mixing for being emphatic, code mixing in form of interjection, code mixing for purpose of clarification, code mixing to express group identity. Based on the analysis of data the researcher has found out; three times the reason behind code mixing by speaker was because of talking about a particular topic three times the speaker had to switch between languages because they were unable to find a suitable equivalent in a language they were speaking two times the speakers preferred to switch language for the reason that they were more comfortable to be emphatic in second language. Only one time the process of code mixing took place for the reason that speaker wanted to clarify his statement that's why he switched his language.

To conclude the researcher has observed that insertion is the most common and usual pattern of code mixing that occur in daily conversations between bilingual doctor and patients, the researcher has also found that most common reasons for process of code mixing includes the fact that speakers feel comfortable talking about a particular topic in their second language, while the lack of lexicons in languages is another motivation for code mixing in bilinguals.

Recommendations

The current research is limited to analysis of ten interactions between doctor and patients, analyzing the types of code mixing based on theory of Muysken (2000), and the reasons behind code mixing proposed by Hoffman (1991). Interested researchers can further conduct their researches on the other linguistic aspects of bilingualism in context of doctor and patient's conversation, the researchers further can also analyze the effects of code mixing and code switching on treatment received by patients. This research is expected to sharpen and be helpful for readers in the understanding of types of code mixing in the light of Muysken's (2000) theory, and its reasons proposed by Hoffman (1991).

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- The author agrees to take responsibility for every facet of the work, making sure that any concerns about its integrity or veracity are thoroughly examined and addressed

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