



# Contrastive Analysis of Cross-Linguistic Interference of Trilingual Oil Workers

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## Abstract

The objective of this study was to identify, describe and classify errors in the Russian and English speech of the native Kazakh speakers working in the oil industry as well as to give a possible explanation of the reasons for their occurrence. The cross-linguistic interference characteristics of the Kazakhs' speech were investigated with the involvement of 30 Kazakh oil workers. Based on the contrastive linguistic analysis of the Kazakh, Russian and English languages, typical errors in the oil workers' speech were established. After gathering the data, the numbers and percentages were employed. The data was then grouped and categorized as per the problems of the study, the characteristics of the items, and the objectives before analyzing it on the basis of frequency of responses. The study has shown that in the speech of oil workers, there were interferences like under-differentiation, over-differentiation, reinterpretation, substitution. These interferences in the speech of trilingual (represented phonetically, lexically, and grammatically) were more complex than in bilingualism. Kazakhs' Russian speech was also found as close as possible to the norms of the Russian language, and with trilingualism. There was a two-component unidirectional influence seen on the acquisition of a third language (English). The practical significance of the research lies in the possibility of applying these results in order to draw up a methodological and practical basis for teaching English, taking into account the peculiarities of the differences in language systems.

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**Keywords:** contrastive linguistics, interference, Kazakh-Russian-English trilingualism, L1-L2, language contacts, polylingualism.

## Introduction

In linguistics, interference, along with bilingualism and multilingualism, is one of the main problems of linguistic contacts (Antoniou, Best, Tyler, & Kroos, 2011; Dzhusupov, 2017; Lev-Ari & Peperkamp, 2014; Nesme et al., 2014). When studying the challenges of bilingualism and multilingualism, the question of interference invariably arises. There are studies on phonetic interferences (Chaichian, Isaev, Lukierski, Popowicz, & Prešnajder, 1991; Dzhusupov, 1991)

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grammatical (Bezdenzhnykh, Karanina, & Yartseva, 2020); lexico-phraseological (Aljaaidi, Manaf, & Karlinsky, 2011), and syntactic (Arakin, 1989) interferences in Russian. This has allowed linguists to develop effective methods of preventing interference and give practical recommendations on how to eliminate it.

The term “interference” was introduced by the works of scientists from the Prague Linguistic Circle. However, this concept gained wider application after the publication of Weinreich's monograph “Language Contacts”, which was the first publication of the New York Linguistic Circle (Llama, Cardoso, & Collins, 2010). Interference refers to cases of deviation from the norm in bilingual speech in L2 under the influence of L1. Cases of deviation from the norm in a bilingual's native language as a result of L2 influence refer to intercalation (George-Hyslop et al., 1990; Zakir'yanov & Khamzin, 2011). The main cause of intercalation is not structural differences between the contacting languages, nor mental patterns of inter-lingual identification, nor a low degree of L2 proficiency or insufficient speaking practice in L2 (which is characteristic of interference), but primarily various social reasons and especially the importance of the functional load of the L2 in a bilingual's life.

The phenomenon of interference and the reasons for its occurrence are studied from different points of view - psychological, psycholinguistic, sociolinguistic, linguistic, and methodological. From psychological point of view, the reason for the interference lies in the unconscious transfer of skills, while from the linguistic point of view of, it studies systemic discrepancies between languages (Gollan, Schotter, Gomez, Murillo, & Rayner, 2014; Hipfner-Boucher, Lam, & Chen, 2015). Today, the study of interference is carried out mainly within the framework of the linguistic approach, since it opens the way to predict possible cases of interference based on the analysis of potential interference fields of contacting languages and preliminary consideration of those factors or conditions that contribute to the appearance of the interfering influence of the native language (Meyer et al., 2018; Salesse-Smith, Sharwood, Busch, & Stern, 2020; Westergaard, Mitrofanova, Mykhaylyk, & Rodina, 2017).

Interference is an integral part of the process of slow, gradual inclusion of one or another foreign language element into the system of the perceiving language (Odone et al., 2015). This process itself in linguistics is called diffusion. The diffusion process has two stages: 1) interference and 2) integration. At the first stage, the linguistic change is perceived by the bilingual as a deviation from the norm. In the future, it may or may not become the norm. In this case, the deviation observed in the language enters the stage of integration, and becomes an integral part of the borrowing language (Chung, Chen, & Geva, 2019).

Such linguistic phenomena that arise in speech under the influence of contact episodically do not become widespread nor become a norm in the language. These are often referred to as fields of interference (Hipfner-Boucher et al., 2015). When two languages interact in a bilingual's consciousness, the phenomenon of so-called linguistic identification arises. The essence of such interaction is to establish a certain connection between identical and similar linguistic units in adjoining languages. In cases of wrong identification of the phenomena of contacting languages, interference errors occur (Hipfner-Boucher et al., 2015).

The nature of interference, the degree of its display and distribution depend on various factors, in particular: 1) on the type of bilingualism; 2) on the method of acquiring bilingualism; 3) from the structure and system of contacting languages (Zakir'yanov & Khamzin, 2011). Since interference is nothing more than the transfer of skills from one language (native) to another (non-native), the phenomena of positive and negative transference should be differentiated. The influence of the mother tongue (past linguistic experience) on the second, non-native language, when studied can be positive on both languages. This facilitates the formation of new speech skills and abilities, which, if negative, makes it difficult to master new knowledge, skills, and abilities. The positive influence of the native language in the methodological literature is usually called the term “transposition”, and the negative influence, as has already been mentioned, is “interference” (Harvey, Traut, & Middleton, 2019; Hipfner-Boucher et al., 2015).

In linguistics, there are several theories of interference – psychological, psycholinguistic, and linguistic, where the paradigmatic and syntagmatic aspects are distinguished. They cover all types of interferences, in which potential and actual interferences are distinguished. Standing apart are the supra-level (or inter-level) (i.e., stylistic interference) and situational interference (Dzhusupov,

2017). The real source of interference is the mixed mechanism for generating texts in two languages, which occurs when the mechanisms for generating texts in different languages are not clearly opposed in a speaker's mind, when the systems of these languages in his/her mind are not sufficiently differentiated. This insufficient opposition arises due to a speaker's insufficient linguistic experience (Aljaaidi et al., 2011).

The opposite transfer of skills and abilities is called transposition, and negative - interference or “mutation” (George-Hyslop et al., 1990). With a speech mutation in a bilingual speech, various kinds of deviations from the norm of the target language occurs due to perception difficulties (Charlesworth et al., 2019). The mechanism of interference in trilingualism is more complex than in bilingualism. With bilingualism, there is a unidirectional influence of the native language on the foreign language, and with trilingualism, it is bi-directional: the native language and the first non-native language affect the second non-native language. When learning a second non-native language, an oilman most often builds his/her speech according to the norms of the native language, or according to the norms of the second language or the mixed norms of the native and second languages.

In this research, the term “interference” is used according to the psychological and linguistic understanding with two meanings: first, as a process of negative interaction of speech skills of the native language and the second (and other) acquired languages; second, as a result of this process, displayed in the speech of a trilingual in the form of deviations from the norms of the target language. It should be noted that contrastive studies are conducted for different purposes. Almost all contrastive studies related to the theory of interference were carried out within the framework of taxonomic theory. To a greater extent, this applies to works with a pedagogical orientation (Abramova, 2012; Aronin, 2019; Bhatia, Richie, & Zou, 2019; Hipfner-Boucher et al., 2015; Hulstijn, 2015; Issabekova, Abdillaev, Altynbekov, Kasymbekov, & Duysenov, 2016).

A contrast analysis of two languages associated with the theory of interference is fraught with great difficulties. The mere arrangement of the rules of two languages against each other is not a contrastive analysis. Two completely identical rules can be differently interrelated with other rules in two languages that their formal and structural identity can be fragile. When mastering the second, and even more so the third language, a trilingual has the experience of mastering the native language (Cenoz & Gorter, 2020). This experience not only helps, but also hinders, and becomes the cause of the interference phenomenon since there are significant structural differences between the native and the target languages (Cenoz & Gorter, 2020; Dinevich, 2021), depending on the structure and system of languages in contact (this study focuses on Kazakh, Russian and English, which belong to different language systems).

At present, the phenomenon of interference is of particular interest to the scientists dealing with the acquisition of a foreign language, a field that in English-speaking countries is considered as an independent discipline within the framework of applied linguistics. Detection of the nature of errors in the speech and their typological description is carried out on a large number of languages in contact (Dhooge & Hartsuiker, 2012; Gollan et al., 2014; Klecha, 2013; Oktay et al., 2018).

The term “transference” is often used in the context of transferring both specific and general typological features of contacting language systems (Cook, 2010; Declerck, Lemhöfer, & Grainger, 2017). In the works of some linguists, the term “interference” is most often used as “language transfer”, but there are other equivalents: L1 interference, linguistic interference, cross-linguistic influence, transference, interference. The most commonly used is the neutral term “language transfer”, which is interpreted as the process of transferring elements of one language to another language. In other words - the mutual transfer of language features in a bilingual or multilingual speech (Grosjean, 2012; Llama et al., 2010; Williams & Hammarberg, 2009).

Other researchers, however, find the term “transfer” inappropriate to encompass the full range of language contact effects. They consider the term “cross-linguistic influence” more appropriate to refer to language contact phenomena (Angelovska, 2018; Jarvis, 2008). Ellis's definition can be called the most common, where interference is represented as the inclusion of native language (L1) features into a foreign language (L2) system, which a student is trying to form (Ellis, 2006). Thus, the French psycholinguist Grosjean uses the concepts of transfer and interference as synonyms,

but at the same time notes the need to differentiate them, taking into account the factor of permanence (Grosjean, 2012). According to Grosjean (2012), transference is mainly static, since it reflects constant “traces” of one language in another (for example, in the case of a foreign accent), while interference is dynamic, since it affects elements of another language that accidentally “slip” into written or oral speech.

The Republic of Kazakhstan, where more than 200 oil and gas fields have been discovered, is one of the major oil-producing countries of the world and is one of the top ten countries in terms of oil reserves. The oil industry is currently the leading sector of Kazakhstan's economy, contributing to the development of the Kazakh-Russian-English trilingualism. Kazakh-Russian-English linguistic contacts in the sphere of the oil industry are connected with the possibility of tripartite influence of languages. The study of the linguistic situation in the sphere of the oil industry allows asserting that Kazakh, Russian and English, functionally interacting, serve as an active means of communication.

The linguistic situation in the oil industry of Kazakhstan is characterized by functioning of the trilingualism with three languages being used in parallel - Kazakh, Russian and English. Kazakh-Russian-English trilingualism is widespread in such spheres of communication of the oil industry as: oil production, oil education, oil record keeping and business communication, oil legislation, oil sciences and oil periodicals.

The first component of the trilingualism - the Kazakh language is spoken by 100% of the surveyed oil workers. The Kazakh language, as the native language of the oil workers, is a means of intra-national communication. The Kazakh language is more and more actively used in professional communication of oil workers. Knowledge of the second component of trilingualism - the Russian language - enables oil industry specialists to communicate not only with representatives of the Russian people, native speakers of the Russian language, but also with representatives of all non-Russian peoples working in this area.

A significant part of the oil workers of Kazakh nationality speak Russian fluently. The third component, the English language, performs the function of interethnic communication here. Working in a multinational foreign language environment, where one has to enter into linguistic communication with representatives of a huge number of nations and nationalities, one should also know the English language.

The study of trilingualism in the oil industry is of interest from the standpoint of sociolinguistics. The role of each language in the formation of such multilingualism is revealed; the reasons for speech interference are determined and its typology is described. The study of trilingualism makes it possible to identify the linguistic and extra-linguistic factors of its formation and the psychology of trilinguals and to determine the nature of an individual's ideas about monolingualism, bilingualism and trilingualism.

The purpose of the study was to identify, describe and classify errors in the Russian and English speech of the native Kazakh speakers working in the oil industry, as well as to give a possible explanation of the reasons for their occurrence. The present paper focuses on the following research questions:

1. What are the reasons for the influence of the native language on the use of L2 and L3?
2. How language is subjected to interference phonetically, lexically, and grammatically?
3. What are the typical mistakes made when using the Kazakh-Russian-English trilingualism?

## **Methodology**

### *Research design and sample*

This research consisted of three stages: preparatory, linguistic and sociolinguistic. The preparatory stage included two stages: a) selection of respondents to identify interference; b) collecting material by recording spontaneous speech of informants. The linguistic stage also

consisted of two parts: a) a comparative linguistic analysis of the Kazakh, Russian and English languages, and b) determining typical mistakes in the speech of trilingual oil workers. The sociolinguistic stage described and analyzed the errors of interference of trilinguals, identified at the linguistic stage.

All stages of the experiment were carried out during the period from 2017 to 2019. The interference characteristics of the Russian and English speech of Kazakhs were investigated with the involvement of 30 oil workers of Kazakh nationality. The respondents were specialists from the oil companies. All subjects were graduates of Kazakh secondary schools whose native language was Kazakh. They studied English as part of the school and university curriculum. The principle for selecting informants in the study was the coverage of representatives of different social and professional groups. In the present study, four age groups were identified: 26-35 years old; 36-45 years old; 46-55 years old; 56-65 years old. There were also three groups according to their educational background: 1) secondary; 2) secondary technical; 3) higher. To study trilingualism (the use of the Kazakh, Russian and English languages) in Kazakh oil industry, letters were sent to the companies with a request for assistance in conducting interview among company workers.

### *Research instruments and procedure*

To obtain more satisfactory data, it was necessary for the investigator to employ many research apparatuses, for example, feedback forms and face to face interviews. The informative for the research was the method of observing trilingual speech. This method made it possible to directly monitor the speech of trilinguals, to record the terminology in their speech. Audio recordings of oil workers' speeches on production topics and at meetings allowed identifying the direct trilingualism processes. Along with observation, the method of interviewing the representatives of different social and professional groups was also used. In order to hear the spontaneous coherent speech, the participants were asked questions about their field, technological processes, the nature of their work, etc. As a result, the interview was recorded and an informal oral speech was received.

### *Data analysis*

To study the interference, contrastive and error analyses were used. Contrastive analysis implies investigation of the languages using a detailed description of various facts of the compared languages, taking into account not only the similarities but their differences, with the detection of a pattern of correspondences or inconsistencies in systems.

After gathering the data, the researcher analyzed them systematically. The data was grouped and categorized as per the problems of the study, the characteristics of the items, and the objectives. The numbers and percentages were employed. The data was analyzed and scored based on the frequency of answers.

## **Results**

The observations of the Russian and English speeches in different social, professional and age groups in the oil industry allowed identifying the main cases of phonetic, lexic-semantic, and grammatical interferences.

### **Phonetic interference**

In the Kazakh speech of an educated oilman, it is difficult to hear the sound [f] instead of [n]. At present, the sound [f] in such Russian terms as *neft'*, *vodoneftyanoy*, *neftyanik*, *fontan* is pronounced without errors. This study discovered a few types of sound interference on the basis of Dzhusupov's (1991) classification (Figure 1). However, in conversations with representatives of other social and professional groups, interference phenomena appeared.

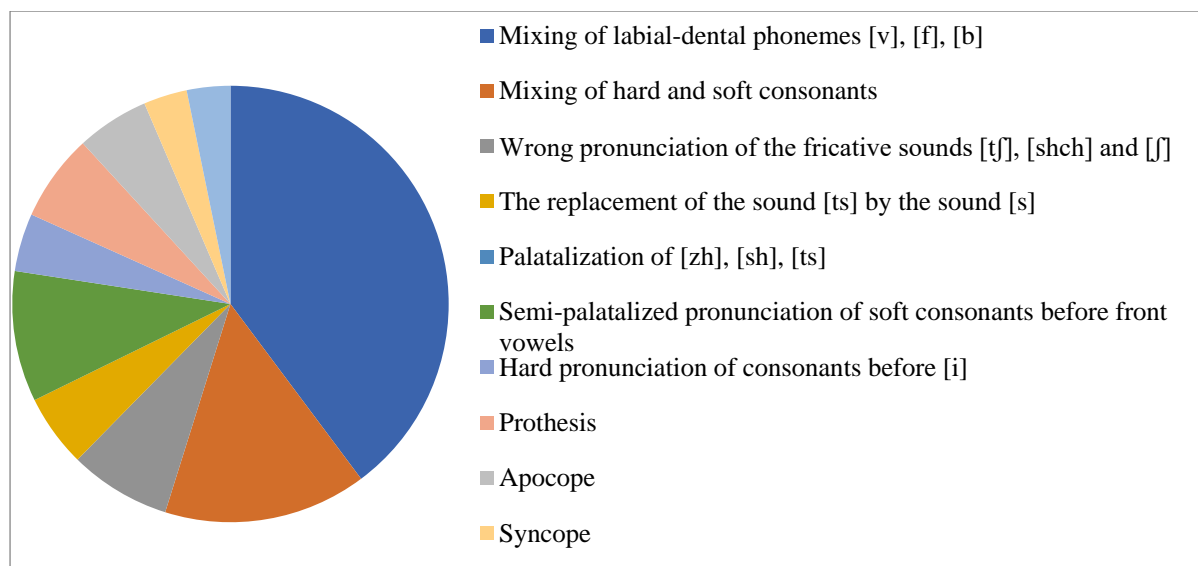


Figure 1. The most typical types of phonetic interference in the Russian language of Kazakhs

The most typical phonetic interference phenomena in the Russian speech of Kazakhs are:

### i. Under-differentiation

- Mixing of labial-dental phonemes which are absent in the Kazakh language [v], [f], [b], occurring in the following words (in descending order): *vodone[p]tyanoy*, *po[b]yerkhnost'*, *tru[v]oprovod*, *tru[v]*, *ot[v]or*, *[b]yazkost'*, *vi[v]ratsionnyy*, *o[v]valov*, *kak [v]y*.
- In the Kazakh language, there is no opposition of phonemes based on hardness and softness. Guided by the law of harmony, which operates in the native language, the oilman of Kazakh nationality mixes hard and soft consonants in pronunciation in Russian. For this reason, s/he pronounces hard consonants - softly, soft consonants - hard. The expected under-differentiation in the mixing of hard and soft consonants was confirmed in the following cases: *buri[l']nykh*, *zale[zh']*, *verkh[na]ya*, *ug[lyu]bleniya*, *neft[t']*, *us[t']ye*, *sh[n, ye]k*, *pro[mi]shlennost'*.
- Wrong pronunciation of the fricative sounds [tʃ], [ʃch] and [ʃ] were revealed: *zhelob[shch]atoy*, *[tʃ]yestigrannyy*, *[shch]yestigrannyy*, *sleduyu[ʃ]ikh*, *vra[ʃ]ayu[ʃ]ikhsya*.
- The replacement of the sound [ts] by the sound [s] revealed in: *[s]yementirovochnyy*, *margane[s]*, *absorb[s]iya*. As one can see, interference is observed here in the form of replacing [ts] by the sound [s], however, other variants of pronouncing this sound are possible – [cs] or [ts]. For example: *emul'[tss]iya*, *akkumulya[tss]iya*.

### ii. Over-differentiation

The expected interference errors in the implementation of Russian consonants [k], [k`], [g] and vowels [o] and [a] were not reflected in the pronunciation of words with these phonemes.

### iii. Substitution

Palatalization of [zh], [sh], [ts]: There is a small percentage of word forms in which [zh] and [sh] are palatalized: *mestoro[zh,]deniye*, *skva[zh,]jina*, *[sh,]aroshka*, *[sh]nek*, *plun[zh,]yer*, *vy[sh,]ka*. There were also semi-palatalized pronunciation of soft consonants before front vowels: *bu[re]nii*, *p[re]dokhranit'*, *me[re]*, *o[pe]ratsiy*. A few examples of hard pronunciation of consonants were also seen before [i]: *po[ry]stost'*, *[vy]bratsionnyy*.

### iv. Syntagmatic interference: Plus and Minus segmentation

Cases of the prothesis, the insertion of an extra vowel sound when consonants are confluent in one syllable, are insignificant. Most of the erroneous pronunciations fall on the word: *[y]skvazhina*. For the Russian speech of trilinguals, the phenomenon of apocope is characteristic, which is explained by the absence of consonants' accumulation at the end of morphemes in the Kazakh language. Interference errors of this type were found in 4.3% of utterances, mainly in the speech of trilingual specialists of the older generation, for example, in the words "yemkost" - *yemkos[ ]*, "poverkhnost'" - *poverkhnos[ ]*, *vyazkos[ ]*, "plotnost'" - *plotnos[ ]*, "moshchnost'" - *moshchnos[ ]*.

Cases of syncope and apocopy were also identified, but there were fewer cases of apocopy. The following words were subjected to syncope (the loss of sounds in the middle of a word): *sledu[ʃshchikh]*, *vybrats[ʃonʏy]*. Violation of the norms of stress: *stola*, *ob'sadnykh*, *zhelob'chatoy*, *do'lotom*; *trubo'provod*, *'dobycha*, *yemkos'tya*.

Further, the implementation of phonetic interference in the English language of Kazakh-trilingual was considered in this study (Figure 2).

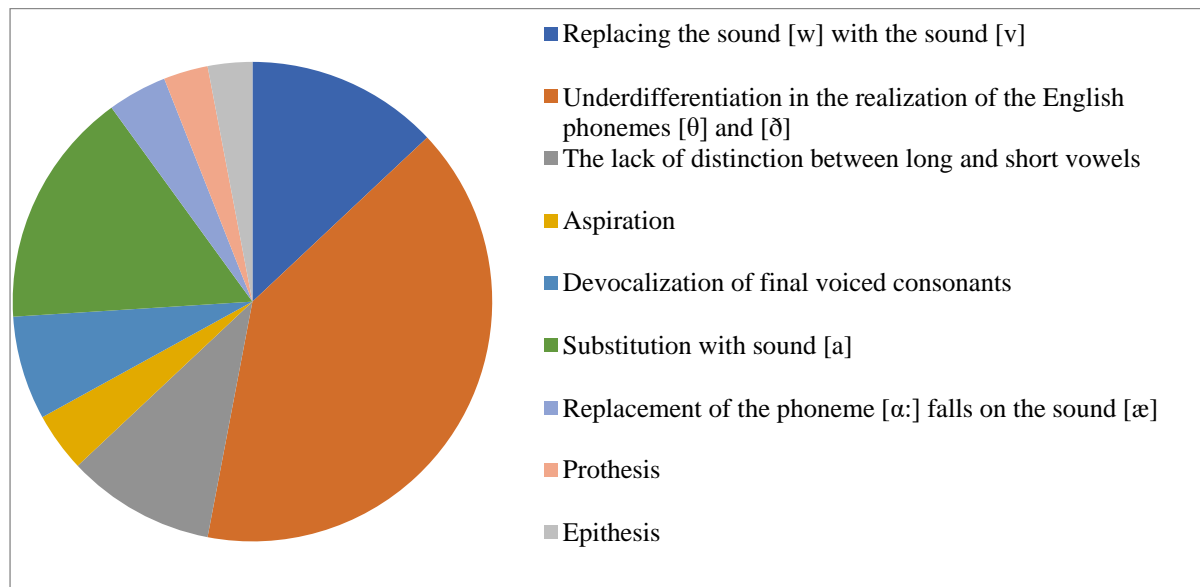


Figure 2. The most typical types of phonetic interference in the English language of trilingual Kazakhs.

### i. Under-differentiation

- Replacing the sounds [f] and [v] with the sounds [p] and [b]: Theoretically, Kazakhs cannot pronounce neither Russian [f] and [v], nor English [f] and [v], therefore, under-differentiation is possible, since they (Kazakhs) cannot rely on the Russian language, i.e., they cannot use the positive influence of the second Russian language. However, such deviations were not recorded.
- The absence of the phoneme [w] in both Kazakh and Russian leads to misunderstanding. This type of interference, i.e., under-differentiation, took place when a Kazakh-trilingual pronounced the following English words: *well* E [wel] - K [vel], *wellhead* E [welhed] - K [velhed], *when* E [wen] - K [ven], *requiment* E [ri 'kwai əmənt] - K [ri 'kwai əmənt], *water* E [wo:t ə] - K [vo:tə], *will* E [wil] - K [vil]. In other cases, a combination of sounds close to the norms of English pronunciation was revealed.
- Cases of under-differentiation were found in the realization of the English phonemes [θ] and [ð]. For example, in the following words instead of [θ] found [s] or [t]. For example: *something* E [səmθ ɪŋ] - K [səms ɪŋ], *method* E [meθəd] - [meso:t], *E lithological* [liθ ə' lodʒɪkl] - K [lisə' lodʒɪkl], *depth* E [depθ] - K [deps]. Replacement of English phonemes [ð] with sound [z] was detected in 40%. For example, in such common words as *with* E [wɪð] - K [wiz], *the* E [ðə] - K [zə], *E gathering* ['gæðəri ŋ].

### ii. Errors in the phonemic duration of vowels.

The lack of distinction between long and short vowels in the Kazakh and Russian languages is one of the reasons for the violation of longitude in English long vowels. The longitude and shortness of vowels is a phonetic phenomenon typical of modern English, complicated by qualitative differences in similar paired vowels in timbre: [ɪ] - [i:], [u] - [u:], [o] - [o:], etc. Many English words are recognized only due to the differences in the sound of such vowels. Errors in longitude and shortness, together with quality deficiencies, lead oil workers to distort and violate the norms of English pronunciation and are typical mistakes of Kazakh oil workers. For example: *E water* [wo:tə] - K [votə], *E fields* [fi: ldz] - K [filds], *E plant* [pla:nt] - K [plant], *E mast* [ma:st] - K [mast], *E work* [wə:k] - K [wək], *E crude* [kru:d] - K [krud] etc.

### iii. Aspiration.

The phenomenon of aspiration in the three English voiceless consonants [p], [t], [k] is a specific feature of the English phonetic system. However, with all this, the characteristic errors in the aspiration of English consonants are secondary, and they are not considered extremely significant. Aspiration is not that meaningful, and its absence is just a violation of the pronunciation norm, and not a distortion.

### iv. Devocalization of final voiced consonants.

One of the most persistent mistakes made by oil workers in English pronunciation is devocalization of final voiced consonants. For example: *E settled* [setld] - *K [setlt]*, *E valves* [vælvz] - *K [valvs]*, *E wells* [welz] - *K [wels]*, *E guns* [gunz] - *K [guns]*, *E system* [sistəmz] - *K [sistems]*, *E operations* [opəreɪfɪnz] - *K [opəreɪfns]*.

### v. Substitution

Substitution with sound [a] accounts for 11%, for example: *balance* *E* ['bæləns]- *K* [ba'lans], *mechanical* *E* [mi'kænikl]-*K* [me'hanikl], *interval* *E* ['intəvəl ] - *K* [inter'val]. Moreover, the replacement of the phoneme [ɑ:] falls on the sound [æ]: *passed* *E* [pa:st] - *K* [pæst]. It should be noted that, as a type of interference, substitution does not hinder mutual understanding, but distorts the pronunciation norm of the Russian speech.

### vi. Syntagmatic interference

As a result of the experiment, some cases of examples of prothesis and epithesis were revealed, which cannot be considered as interference errors. For example: *E settled* [setld] - *K* [setlet]. In the English speech of trilinguals, the phenomena of minus segmentation were not found as cases of interfering influence of the native language.

## Lexical semantic interference

The result of the interaction of the components of the Kazakh-Russian-English trilingualism at the lexical level is the interference in the Russian and English speech of Kazakhs. The main reason for interference errors at this level lies in semantic and structural discrepancies in the vocabulary of the Kazakh, Russian and English languages, in particular, in the discrepancy between the meaning of words, their lexical compatibility and associative links in trilingualism components (Figure 3).

The most common lexical interference phenomena in the Russian speech of Kazakhs are deviations from the norms of Russian word use, due to the difference in the meaning of words. Typical mistakes in the Russian speech of oil workers are the following:

### i. Misunderstanding of the following words:

- *Seismologicheskkiye kollektorskiye kharakteristiki produktivnogo plasta vse te neobkhodimyye informatsii provodyatsya, sobirayutsya, issleduyutsya / vot / i tak daleye, tret'ye;* (Concerning seismological reservoir characteristics of the productive stratum, all the necessary information was obtained, collected, investigated / here / and so on and so forth);
- *slovo mestorozhdeniye eto perekochevalsya iz geologicheskikh terminologiy, kotoryye pol'zuyutsya geologi / /;* (... the word "deposit" has migrated from the geological terminology used by geologists //);
- *I vot ya uchastvoval postoyanno v mezhdunarodnykh konferentsiyakh, simpoziumakh, kongressakh, kotoryye proiskhodyat 1 raz v 3 goda.* (And so I constantly participated in international conferences, symposia, congresses, which took place once every 3 years).
- *Postепенно iz oborota RYA vydavliwayetsya kazakhskim, ne to chto vydavliwayetsya, on prosto ukhodit.* (Gradually, the Russian language is squeezed out of the circulation by the Kazakh language, not that it is squeezed out, it simply disappears).
- *A yesli yemkost' net ili svarochnyye raboty posle mazuta nado chistit' vot togda nasyshchennym parom obchistivayem etu yemkost'.* (And if there is no container or welding work after fuel oil must be cleaned, then we clean this container with saturated steam).



### ii. Incorrect use of a phraseological combination

In the Russian speech of oil workers, there is very often an incorrect use of a phraseological combination, or its inappropriate use: For example, *nakrylas' mednoy kryshkoy (mednym tazom), neozhidanno-negadanno (nezhdannno-negadanno), nikomu ne sekret (ni dlya kogo ne sekret)*. A significant part of such lexical errors is associated with the contamination, which is regarded as a fact intra-linguistic interference. In English speech, the following is exposed to contamination, for example, *after then - after that; to offer - to suggest, to take exams - to pass exams, to graduate - to finish, etc.:* - *After I **graduate** my school.....high... or -... I **took** exam to the College.....and so on.*

### iii. literalisms or literal translations

In the Russian speech of Kazakhs, there are also so-called literalisms, which are a verbatim, literal translation from the native language into Russian or English, leading to a violation of the lexical compatibility of the words of the Russian and English languages. This is especially evident in the English speech of oilmen: *I will wait with interesting our meeting, or When you have a bad English you have **a bad place** in the company*. Lexical interference in the Russian and English speech of Kazakhs reveals itself in different ways in different social and professional groups of oil workers.

In the speech of specialists with a secondary specialized education, lexical interference appears more strongly than in the speech of trilinguals with higher education. Middle-level specialists have a vocabulary that allows them to read special literature, periodicals in Russian and English, and make presentations. The lexical interference phenomena observed in the speech of the trilinguals of this group are determined mainly by the discrepancy in the meaning of words in Kazakh, Russian and English languages.

The vocabulary of trilinguals who have graduated from higher education allows them to easily use Russian and English in many spheres of communication. In the Russian speech of a trilingual, there are practically no interference errors, and in the English speech, there are some of the most stable interference phenomena - mixing of semantically close words, lexical units of different styles, etc.

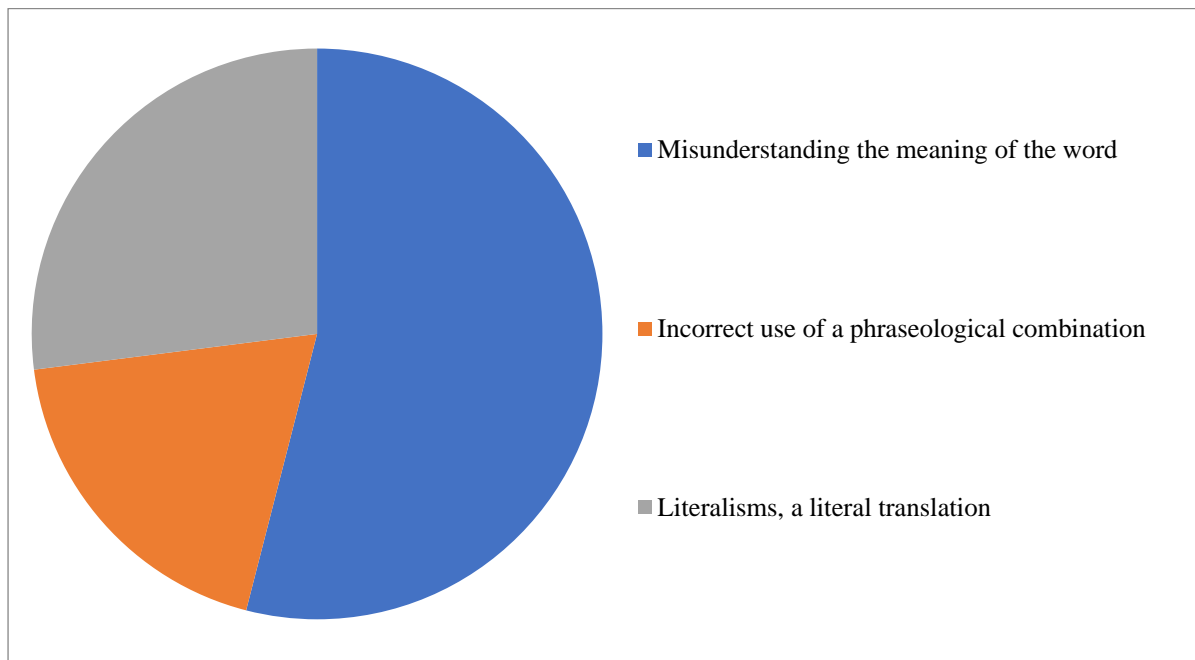


Figure 3. The most typical types of Lexical interference in the Russian and English languages of trilingual Kazakhs

### Grammatical interference

The most typical errors in the speech of Kazakhs are associated with the presence in the Russian and English languages of certain categories that are absent in the Kazakh language (Figure 4).

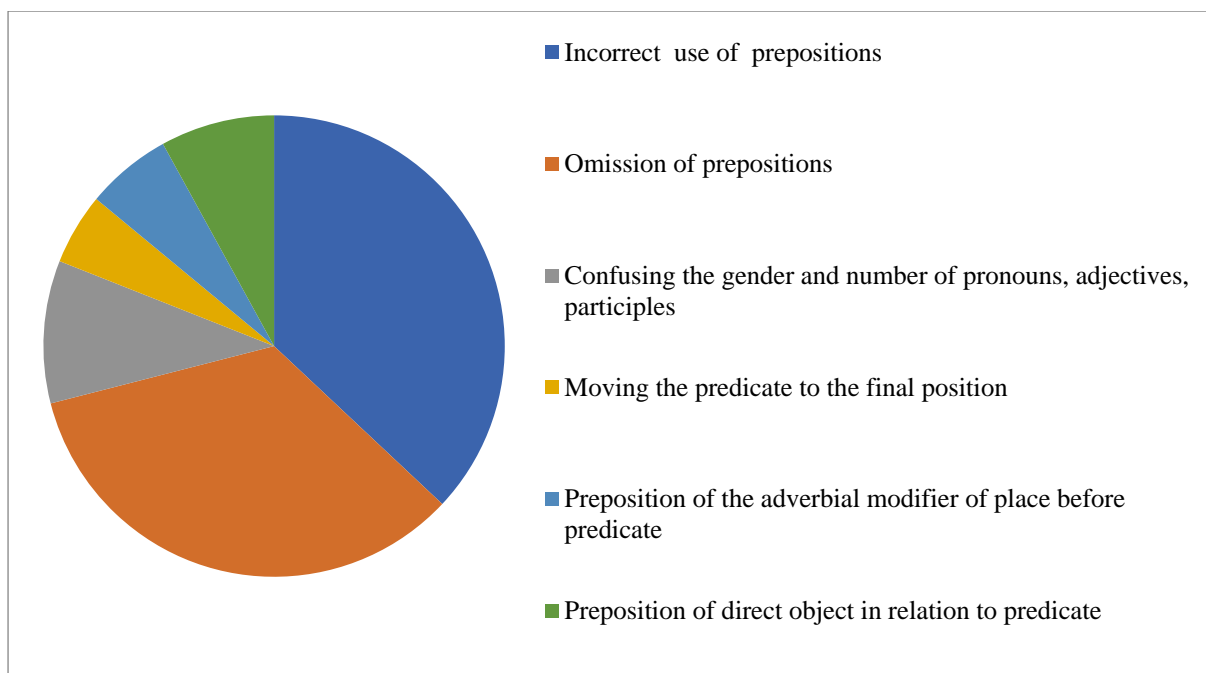


Figure 4. The most typical types of Grammatical interference in the Russian language of trilingual Kazakhs

Typical phenomena of this kind of interference in the Russian speech of trilinguals are:

1. *Absence of prepositions* in the Kazakh language leads to the fact that trilinguals sometimes mistakenly use the wrong prepositions: *Opuskayem avariynnyy instrument ...e.. navorachivayetsya na trubu i ...nu tak yesli grubo skazat' na trubu/ i opuskayem na skvazhinu do zaboya i lovim to, chto tam ostavili, chto tam lezhit koroche//*; We lower the emergency tool ... er .. , to put it roughly, it wraps around the pipe ... and lower it to the bottom of the well and catch what was left there, in a word //;
2. *Omission of prepositions*, which is explained by the absence of this category in the Kazakh language: *Posle po dannym razvedki, te raboty, kotoryye ya v nachale govoril, vot/ po rezul'tatam etikh robot/ vot/ sostavlyayetsya karta etogo mestorozhdeniya/*; After, according to the exploration data, those works that I said at the beginning, here / according to the results of these works / here / a map of this deposit is being drawn up /;
3. *Errors in coordination*: confusing the gender and number of pronouns, adjectives, participles: for example, mixing of number forms: *Dal'she u nego kak govoritsya dvizheniya net/ tam skaplivayetsya po kaplyam/ po kaplyam/ po kaplyam/ za dolgiye geologicheskiye vremena, ochen' dolgo/ vot ...//* (Then, as they say, there is no movement / it accumulates drop by drop / drop by drop / drop by drop / for a long geological time, very long / here ... //) In another example, - *Seismologicheskiye kollektorskiye kharakteristiki produktivnogo plasta use te neobkhodimyye informatsii provodyatsya, sobirayutsya, issleduyutsya/ vot/ i tak daleye, tret'ye//* (Concerning seismological reservoir characteristics of the productive formation, all the necessary information was obtained, collected, investigated / here //) and so on and so forth.

These examples can also be quoted: *Skazhem chto nam povezlo/ my otkryli mestorozhdeniye/ kstati slovo mestorozhdeniye eto perekochevalsya iz geologicheskikh terminologiy, kotoryye pol'zuyutsya geologi s poiske tverdykh poleznykh iskopayemykh/ skazhem uglya/ cherez rudu poleznykh iskopayemykh.* (Let's say that we were lucky / we discovered a deposit / by the way, the word "deposit" has migrated from geological terminology that geologists use when searching for solid minerals / let's say coal / through mineral ore.)

Other examples run thus: - *Sperva/ iznachal'no/ dlya/ obnaruzheniya/ mesta neftegazokondensatoskopeniy/ skopenii/ provoditsya/ provoditsya razvedochnyye raboty//*; (First / initially / for / detection / location of oil and gas condensation / accumulation / exploration is / is being carried out //; or *Oni dvizhushchiyesya/ vot... vot... s odnogo mesta migriruyut na drugoye mesto, poka oni ne popadayet v lovushku//*. (They are moving / here ... here ... from one place they migrate to another until they get trapped //).

4. *Mixing of case forms: - A yesli yemkost' net ili svarochnyye raboty posle mazuta nado chistit' vot togda nasyshchenny parom obchistivayem etu yemkost'. And if there is no container or welding work after fuel oil needs to be cleaned, then we clean this container saturated with steam.*
5. *Failure to distinguish gender: Dizel'noye elektrostantsiya, geologicheskiye vremya, geologicheskikh terminologiy. Diesel power plant, geological time. Geological terminology.*
6. *In the Kazakh language, the verb is at the end of the phrase. This rule is also used in the Russian speech of the Kazakhs.*
7. *Moving the predicate to the final position: Examples are - Elektrostantsiya ustanavlivayetsya gde peredacha ne podvedena (The power plant is installed where the transmission is not connected). Elektrodvigatel' vrashchayetsya, tam kachalka stoit, vertelka nazyvayetsya (The electric motor rotates, there is a rocking chair called the skewer); - Skvazhinu ot parafina prochishchayem (We clean the well from paraffin); Tam shchit yest'. (There is a shield there); U nas seychas montazh idet (We are currently assembling) and so on .*
8. *The preposition of the circumstances of the place in relation to the predicate is noted. Examples include Vintovoy nasos v opredelennuyu glubinu ustanavlivayetsya (The screw pump is installed at a certain depth); Kolokol na trubu navorachivayetsya. (The bell is wrapped around the pipe) and so on.*
9. *Preposition of direct object in relation to predicate: Examples include - Skvazhinu ot parafina prochishchayem (We clean the well from paraffin); Toretam i Akkyr skvazhiny u nas probureny (We have drilled Toretam and Akkor wells).*

Several mistakes were observed in the English speech of trilinguals:

1. *Use of prepositions: This happens because there are no prepositions in the Kazakh language, so an oil worker builds phrases and sentences in English using the syntactic compatibility of the Russian equivalent, which also leads to the following typical mistakes:*
  - *He entered into the room.*
  - *Oil well casing is made from solid drawn tubes.*
  - *The turbodrill is powered with a multiple-stage hydraulic turbine.*
  - *The cuttings are lifted from the hole with the drilling fluid.*
  - *There are different kinds of oil wells depending from the purpose for which they are drilled.*
  - *The diameter of the oil string depends in the expected productivity of the well.*
  - *The depth of an oil well is controlled by the depth at which oil is found.*
  - *We use an explosive to shut the well and the oil will come from the well.*
2. *Omission of the ending -s, -es. Observations show that despite the fact that the conjugation system of the present tense of the English verb seems to be very simple, the largest number of errors of the Kazakh-Russian-English trilinguals falls on the omission of the ending -s, -es. For example:*
  - *He work as a teacher and teach my subject, so he work as a dean of the faculty..*
  - *Turbine drilling demonstrate such benefits as fast penetration and reduced rig wear.*
  - *Petroleum become harder to find and is located much deeper.*
  - *The installations is very noisy which make working conditions hard.*
  - *Drilling oil and gas have become widespread and universal.*

In this case, the reason for the typical errors should be explained by the homonymy of the plural endings -s, -es.

3. *Error of the Tenses: There are only three grammatical tenses in the verb system in all three languages: present, past and future. However, to express these three tenses in three languages, different forms are used. In the English language, there are four groups of tenses, differing both in formation and in use, which causes difficulty for Kazakhs in their assimilation, therefore, in their speech such mistakes are typical and numerous as:*
  - *After I graduate my school ... ..high...*
  - *And for 2 years I am working here.*
  - *I was studying English in Kazakh-Turkish school.*
  - *So I finished school in 1959. So I go to study in the Kazakh Chemical Institute.*
  - *After that I go to the plant and worked at the plant 2 years. After that I go to the Soviet Army as officer, after 1 year I back at my plant.*

4. *Incorrect word order*. This indicates that grammatical structuring follows the native (or first non-native) language model: For example:

- ...which diameter is **progressively** reduced.
- The drill pipe must **periodically** be removed from the hole in order to replace the bit.
- Hydraulic horsepower of pumps is not always **completely** used.

These errors show that the degree of manifestation of grammatical interference is associated with age, educational level of a trilingual and other factors of a linguistic and extra-linguistic nature (Figure 5).

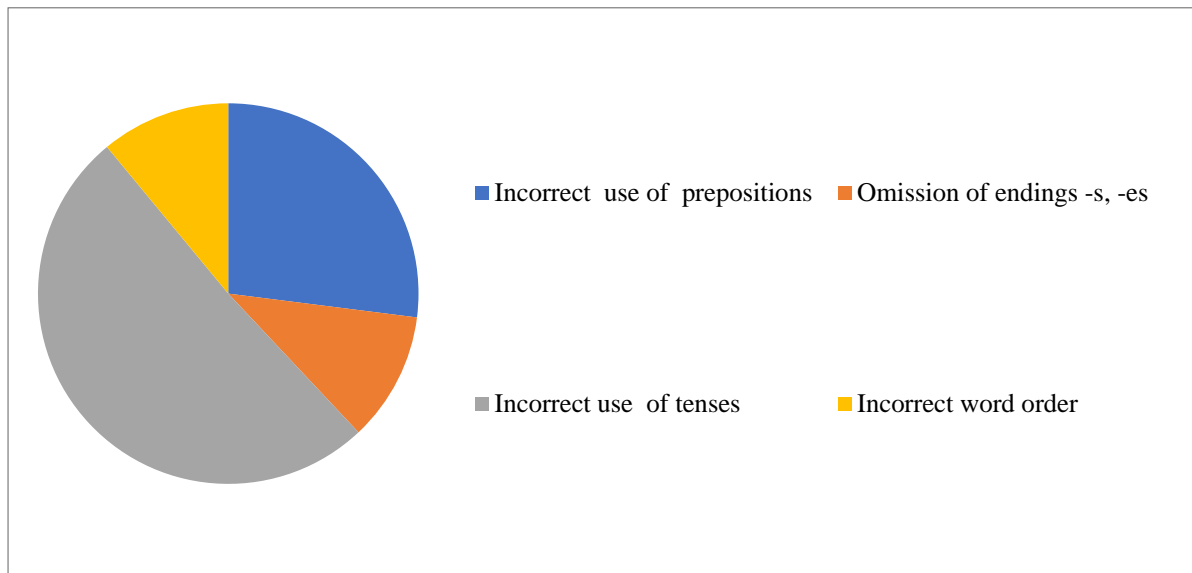


Figure 5. *The most typical types of Grammatical interference in the English language of trilingual Kazakhs*

The grammatical level of the Russian speech of trilinguals with secondary specialized education is characterized by an insignificant number of deviations from the norms of the Russian language. The most typical of them are mixing of prepositions, incorrect formation of plural forms, etc. In the English speech of oil workers, the largest number of mistakes is due to the incorrect use of tense forms and the use of prepositions.

In the speech of trilinguals with higher education, the minimum number of deviations from the grammatical norms of the Russian language is noted, which indicates a high level of Russian language proficiency in this social and professional group. The phenomenon of interference observed in the English speech of trilinguals consists in the misuse of subordinate conjunctions, in the use of literalisms (literal translation) by analogy with the Kazakh and Russian languages.

## Discussion

The impact of the Kazakh language on Russian and English has given rise to various deviations from the phonetic norms of the Russian and English languages, which are displayed in different ways in the speech of various social and professional groups of oil trilinguals. All informants of this study were native speakers of Kazakh. If one analyzes the Russian speech of an oil engineer and the speech of a worker or a representative of the middle echelon, one can note that the latter demonstrates a sufficient number of deviations from the norms of the Russian literary language. An engineer's speech is more normative and built according to the laws of Russian grammar. Therefore, among persons with higher education and among the majority of specialists holding high official positions, the speech is correct, i.e., without interference.

The lexical interference phenomena observed in the speech of the trilinguals of this group are determined mainly by the discrepancy in the meaning of words of Kazakh, Russian and English languages. The linguistic reasons for grammatical interference in the Russian and English speech of oil workers are typological differences in trilingualism components, discrepancies in the composition and meaning of grammatical categories, and the dissimilarity of their syntactic structure.

Factors that cause a multilingual speaker to produce such mixed utterances and forms are a typological similarity between languages (Abramova, 2012; Aljaaidi et al., 2011; Anderson, 1983), frequency of use (Angelovska, 2018; Antoniou et al., 2011; Arakin, 1989), and a speaker's level of proficiency (Aronin, 2019; Bezdenezhnykh et al., 2020; Bhatia et al., 2019; Cenoz & Gorter, 2020; Odlin, 1989), which is influenced by a number of linguistic and extra-linguistic factors: the level of linguistic literacy, age, education, belonging to a certain social and professional group, etc.

## Conclusion, recommendations and limitations

The study found phonetic, lexical, and grammatical interference types in the speech of oil workers. The main types of interference are over differentiation, under differentiation, reinterpretation and substitution. The main reasons for the problem of all these types of interference are the diversity of languages and the existing differences in the structure of linguistic units.

The Russian speech of a trilingual oil worker is as close as possible to the norms of Russian pronunciation, rather than of English. As was noted earlier, the majority of trilinguals belong to social and professional groups, as the middle and top echelon, i.e., these are people with higher education, oil workers with a high level of Russian language proficiency. Therefore, no gross phonetic errors were found in their Russian speech. Interference deviations of other types in the Russian speech of oilmen are also insignificant. Active language practice, the presence of a Russian language environment, intensive study of it at school and at a university, communication in a production and professional environment form language and speech skills to a sufficient extent. On the contrary, deviations were found in the English speech of trilinguals, which indicate that trilinguals have not yet developed stable pronunciation skills in English words and expressions. The most significant social factor influencing the interference is the educational level and social and professional stratification of the informants.

The obtained results of this study should supplement and develop scientific works on the processes that affect the functioning of the Kazakh, Russian and English languages in the speech of multilingual speakers. It is necessary to note that the study is focused only on the data that were available during the research. This is due to the fact that professional communication in the oil industry in most cases is confidential, which creates difficulties in collecting diverse and extensive material and limits the scope of research. This is the reason for the small research sample.

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## Conflicts of interest

The authors declare that there are no conflicts of interest related to this article.

## Availability of data and material

Data will be available on request.

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