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Original article

Influence of Realization of Prepositions and Prepositional Phrases on Their Proper Use in Professional Medical Texts in English

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SUMMARY

Realization of prepositions and prepositional phrases in professional medical texts in English may affect the proper selection of certain prepositions. Also, the use of prepositions is affected by literal translation into English. Today, the English language is the basic language for communication in biomedical sciences, and one of the problems that arises is the proper use of English by scientist non-native English speakers. A review of randomly selected medical professional journals and papers identified some typical misuse of prepositions that can be caused by different realizations of prepositions.

Key words: prepositions, prepositional phrase, medical discourse

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INTRODUCTION

Language, as the primary means of communication, has a decisive influence on the transfer of information among scientists. There is a belief that only communication in English is the requirement for certain investigation to have acceptance in wider scientific community. When we talk about biomedical sciences, English is the main language for communication and unless you know enough English to read the medical literature, it is almost impossible to keep up to date with medical advances (1). Bearing in mind the problems that local authors may face while using English in papers they wish to publish in international journals, we tried to emphasize some of the most common mistakes, important for interpreting the meaning, resulting from improper use of certain English prepositions in writing scientific papers (2). This improper use of certain English prepositions occurs due to the fact that prepositions have different realization where one and the same preposition can carry multiple meanings, i.e. different prepositions can carry the same meaning. Namely, in the English language a preposition expresses a relation between two entities, one being that represented by the prepositional complement (3). There are different types of relations: the relation of time, place, instrument or causes. Also, literal translation in the cases when some specific English preposition is used contributes to improper use as well.

Prepositions in English can be classified according to different criteria: formal, semantic and syntactic. According to the semantic criterion (prepositional meaning), prepositions can be divided into: place prepositions, time prepositions, prepositions of origin, source, cause, aim, means, instrument, manner, agentive, accompaniment, exception, reference, subject matter etc. (4) where in almost every semantic category there are several different prepositions.

Misuse or omission of prepositions can be divided into several groups. As determined, the most common mistakes when using prepositions can be classified into five different categories (2):

a) using a wrong preposition

This type of incorrect use of prepositions is quite common, we can say one of the most common, and it can be found at the very beginning of the paper, when presenting the author or the institution. It can be said that the most common cause of this misuse of prepositions is literal translation into English.

b) omission of preposition-incorrect omission

Omission of preposition-incorrect omission, when it should be used in the sentence, is most commonly found in the position in front of the object of the sentence.

c) unnecessary prepositions, unnecessary words

On the other hand, in some cases prepositions appear at the places where they are not required.

d) confused words

Prepositions that are often confused and improperly used include **on**, **at** and **in** denoting temporal and spatial relations. Apart from these prepositions, a very similar situation occurs regarding prepositions **between** and **among**. It is probably due to the fact that both these prepositions have very similar translation into our language, but they cannot be used in the same cases or be mutually interchanged. **Between** is used when the term referred to a position in relation to the other two, or is located between the two (5). On the other hand, **among** is used when something is placed (or chosen, selected) among more than two.

Prepositions **beside** and **besides** are also improperly used. Again, it is probably due to the fact that both these prepositions have very similar translation into our language. However, regarding their similarity in writing and meaning, they are different. **Beside** means that something is near or next to something else while preposition **besides** means "apart from that or not just that".

Meaning similarities of the prepositions **since** and **for** could lead to their improper use. According to their meaning both prepositions are prepositions of time, apart from their other meanings. However, **since** is more precise regarding the determination of the time period (temporal adverbial), while **for** is less precise and it is usually not translated into our language.

If the prepositions **in** and **within** (in temporal meaning) are interchanged, the result could be the change of meaning. Preposition **in** is used for determining time frame in the future (meaning after that time). If we encompass some time period (with the meaning before the end of that time period) we will use the preposition **within**.

e) misused forms

Sometimes, some prepositions which are closely related to some verbs altering their meaning are wrongly applied or omitted. Combination verb + preposition is called a prepositional verb (6). Certain number of verbs is used with some prepositions where the use of different preposition causes change of phrasal verb meaning. Different verbs change their meaning in the presence of prepositions and in their absence.

MATERIAL AND METHOD

For this analysis, we randomly selected four biomedical journals published in the region of former Yugoslavia (Bosnia and Herzegovina and Serbia).¹ These

¹ Journals: *Materia Medica*, Vol. 23, br. 1, Kliničko bolnički centar Zemun-Beograd, 2007.

Scripta Medica, Časopis Društva doktora medicine Republike Srpske, vol. 34, br. 1, Banja Luka, 2003.

journals were published in 2003, 2005 and 2007. Papers in these journals were from various medical fields. Most of these journals are bilingual and provide papers and their abstracts in English and Serbian. Some of them provide only abstracts translated in English, while the rest of the texts is not translated. Going through the journals, we analyzed the texts and abstracts, as condensed and short text, in order to show how the realization of prepositions can lead to their misuse. Prepositions in the texts are marked and analyzed. For that purpose, we consulted several English language grammars and dictionaries of contemporary English and professional medical language.

Our goal was to determine whether, to what extent and which prepositions and prepositional phrases are used incorrectly.

RESULTS

A review of selected materials revealed that these journals have published articles with improper use of prepositions in their English translations. We observed a total number of 70 incorrect uses of prepositions. Analysis of selected texts showed that all of these categories of improper use of prepositions and prepositional phrases, which we mentioned in the introduction, and other authors have recognized and described them, were not equally represented. We found that in the category of confused words there were 26 examples (7-9, 12, 15, 16, 19-22) (Table 1); in the category of using the wrong preposition there were 16 examples (10-17, 20, 23) (Table 2) and the largest category was the omission of preposition-incorrect omission, where we had 28 examples (11, 18, 20, 21, 24) (Table 3). We seldom encountered some cases of unnecessary prepositions (2 examples, one for with and one for of) (12, 17), while examples for the category of misused forms and application or omission of prepositions, which are closely related to verbs (prepositional verbs) and change their meanings were not present in texts. In the tables, incorrectly used prepositions were marked with an asterisk (*), followed by the preposition that should be used instead. The total number of incorrect uses of certain prepositions, if there were more than one, is listed in parentheses.

Table 1. Confused words

Category of meaning	Improperly used prepositions		
Place	at*→in (x3); in*→at (x4)		
Time	for* \rightarrow during; at* \rightarrow in; within* \rightarrow during		
Having/possession	at*→in (x9)		
Relation between 2/more than 2 items	between*→among (x7)		

Table 2.	Using a	wrong	preposition
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Category of meaning	Improperly used prepositions		
Place	of* \rightarrow on (x2); with* \rightarrow at		
Having/possession	of* \rightarrow in; from* \rightarrow in; for* \rightarrow of (x2); for* \rightarrow in (x2); to* \rightarrow of; between* \rightarrow of		
Cause	of*→for		
Intention/goal	in* \rightarrow to (x2); to* \rightarrow for		
Means	with*→through		

Scripta Medica, Časopis Društva doktora medicine Republike Srpske, vol. 34, br. 2, Banja Luka, 2003.

Vojnosanitetski pregled, Časopis lekara i farmaceuta vojske Srbije i Crne Gore, vol. 62, br. 9., Beograd, 2005.

Category of meaning	Improperly used prepositions
Having/possession	in (x2)
Time	for; from (x1)to (x3)
Quantity/exception	of (x19)

Table 3. Omissie	on of preposit	tion-incorrect	omission
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DISCUSSION

After reviewing the articles and results obtained after the analysis, we noticed that the improper use of prepositions was not influenced by the medical topics written about in the texts, the authors of the texts or journal editors. All three journals in which improper use of prepositions was noticed were different, published themes were also different as well as the authors. However, improperly used prepositions were similar in all these journals. The total number of detected improper uses of prepositions was 70 and they were not distributed evenly across the journals, but the distribution was similar. Some papers and abstracts had larger number of incorrect uses of prepositions than others, but it all varied within the journal.

By analyzing the results we found that the improper use of prepositions is most often due to the fact that certain prepositions can be used to express different meanings, i.e. they have several realizations, and also several different prepositions can carry the same meaning. Literal translation into English contributes to misuse of prepositions.

When talking about the categories of prepositional meaning, we found that the categories of place and time occurred in two groups of improper use of prepositions; place category in the groups of confused words and using a wrong preposition, time category in the groups of confused words and omission of prepositionincorrect omission while having/possession category was present in all three groups of improper use of prepositions listed in the tables above - confused words, using a wrong preposition and omission of preposition-incorrect omission.

This finding is not surprising because these categories of prepositional meaning (time, place, having/ possession) are the most common meanings that are realized by prepositions, and thus, as the most frequent categories of meaning they had the largest number of preposition examples which led to the largest number of incorrect prepositional uses in these categories.

Speaking about improper use of individual prepositions, the preposition **of** dominated and it was incorrectly omitted, or used in 22 cases (11, 13-15, 18, 20). It is followed by the preposition **at** which had 12 improper usages (7, 8, 10, 12, 13, 15), prepositions **in** was improperly used 8 times (7, 16, 19, 20, 22), preposition **between** is wrongly used 7 times (9, 20, 24), prepositions **for** 6 times (15, 18, 20, 21, 24), etc.

Examples for the groups of confused words and using a wrong preposition were frequent and varied while the largest number of cases was related to the group of omission of preposition-incorrect omission. The most frequently omitted preposition was the preposition **of** used for quantity, exemption and possession meanings. Examples of the use of unnecessary prepositions were rare (two examples), while the group of misused forms of some prepositions which are closely related to some verbs altering their meaning (prepositional verbs) was not present in the material selected for analysis and we did not find any examples of it.

Prepositions **in** and **at** in both temporal and spatial meanings were the most frequent prepositions in the group of confused words. Also, they were improperly used for possession meaning. This is probably due to the fact that both mentioned prepositions are used for denoting temporal and spatial meanings, whereas for denoting possession meaning, the preposition **at** is not used. These prepositions (in the group of confused words) were followed by the prepositions **of** and **for** denoting cause, **in** and **to** used for denoting intention/goal, **to** and **for** denoting intention/goal, **of** and **in** used for pace meaning, **with** and **through** for denoting means and **on** and **of** used for denoting intention and place.

Also, we have found improperly used preposition of which is confused with the preposition in in the case where the preposition for denoting possession was needed. Although the preposition of can be used for this meaning, the sentence where this situation occurred did not allow that.

Speaking about using a wrong preposition, we had to mention prepositions of and with. Preposition of was used instead of the preposition for in the phrase reason for something (reason of* something). Examination of the dictionaries of contemporary English² and Dorland's medical dictionary, and English language grammars did not confirm the phrase reason of* something and possible mutual exchanges of the prepositions for and of, in the mentioned phrase, are not found (25-27).

² Examined dictionaries of contemporary English language are *Advanced Learner's Dictionary* i *Essential English Dictionary*.

We found that the preposition \boldsymbol{of} does not appear at all in such a combination.

It is important to note that the prepositions for denoting means, instrument and agentive (**with** and **by**) could be mutually interchanged without affecting the correctness or meaning of the sentence, with the exception of denoting agentive for which preposition **by** is used.

We have already mentioned that there were several examples regarding the prepositions **of** and **in** denoting possession in the group of confused words. However, in some examples we have noticed that these two prepositions could be mutually interchanged (18), but not in all cases due to the fact that their replacement could affect the sentence meaning. For instance, in one sentence it was possible to mutually interchange the prepositions **of** and **in** affecting only the meaning of the sentence not its correctness (11). In that sentence, preposition **of** carried possession meaning, while preposition **in** denoted place.

Also, prepositions **within** and **during** could be mutually interchanged in the temporal meaning without affecting the sentence (20). The same is true for prepositions **on** and **about** (information **about/on**) when speaking about some topic for which we have found examples in analyzed material (21).

Only in a few cases did we find examples for the group of unnecessary words, unnecessary prepositions and these prepositions were **with** and **of** used in the sentences where no preposition was needed at all (12, 17).

On the other hand, cases where preposition was needed but it was absent was far more frequent. The most frequent omitted prepositions were those used for time interval (**from...to.**.) (20, 23). Also, preposition **of** denoting several meanings such as quantity, possession and exception was very often incorrectly omitted [11, 20, 21]. Preposition **for** was omitted in the phrase denoting negative condition (but for) (18).

CONCLUSION

In conclusion, it could be said that the realization of prepositions and prepositional phrases as well as literal translation into English influence the proper use of prepositions in professional medical texts and cause improper use of some of them. Indication of the most common improper uses of prepositions, which could be identified in the professional medical texts is intended to point to the difficulty in selecting appropriate prepositions, to try to facilitate translation and writing, and to warn non-native English language speakers about specific realizations and implementation of prepositions and prepositional phrases.

Specific realization of prepositions and prepositional phrases is a potential problem for doctors and proofreaders and could also be easily overlooked while writing or translating medical papers. We wanted to illustrate that the proper use of prepositions and prepositional phrases is influenced by the specific realizations which cause difficulties in writing and translating.

Due to the nature of language, its vitality, resilience, and rapid variability (English, perhaps more than any other language includes all of the above) we could not give any precise form, pattern or review which would cover absolutely every possible doubt regarding the choice of appropriate prepositions, but we can draw attention to the selection of prepositions and their implementation when writing or translating into English.

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UTICAJ REALIZACIJE PREPOZICIJA I PREPOZICIJSKIH FRAZA NA ISPRAVNOST NJIHOVOG KORIŠĆENJA U STRUČNIM MEDICINSKIM TEKSTOVIMA NA ENGLESKOM JEZIKU

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Sažetak

Realizacije prepozicija i prepozicijskih fraza u stručnim medicinskim tekstovima na engleskom jeziku mogu uticati na ispravan odabir pojedinih prepozicija. Takođe, na upotrebu prepozicija utiče i doslovno prevođenje na engleski jezik. Danas je engleski jezik osnova za sporazumijevanje u biomedicinskim naukama, a jedan od problema koji se javlja jeste pravilna upotreba engleskog jezika kod naučnika kojima to nije maternji jezik. Pregledom nasumično odabranih stručnih medicinskih časopisa i radova uočene su neke tipične pogrešne upotrebe prepozicija koje su moguće uzrokovane različitim realizacijama prepozicija.

Ključne riječi: prepozicije, prepozicijske fraze, medicinski diskurs