

# On the Frequently-used Prepositions in the Titles of Medical Articles Related to Acupuncture and Moxibustion

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**Abstract:** As the frequently-used words, prepositions show certain characteristics in English of medical science and some regularities in the construction of the sentences. However, it is so small that people might confuse and misuse their semantic items. In this paper, prepositions were extracted from English titles of 4 volumes in each key journal related to acupuncture and moxibustion. And, the usages of prepositions were counted, with the result of 1538 prepositions. The first five from the highest frequency to the lowest are “of”, “in”, “on”, “with”, and “for”. Then, an analysis and summary was made in terms of their semantic items, and a discussion was conducted from the view of the combination of their usages with the features of acupuncture and moxibustion. At last, a conclusion was made about the connection between the language of English and the discipline of acupuncture and moxibustion.

**Keywords:** prepositions; acupuncture and moxibustion; frequency; usages

## 1. Introduction

Prepositions are small words, but they play an important role in English learning. Prepositions could be divided into two categories: one is composed of only one word, such as, “of”, “in”, “at”, “on”, etc.; The other has two or more words, such as, “in addition”, “with the respect to”. There are more than one hundred prepositions in English. They are the most active morpheme in English and are widely used. According to statistics, there is one preposition in every eight words in English corpus. In the American English Brown corpus, prepositions account for 12.21% of all words. In the corresponding English LOB corpus, prepositions also account for 12.34% of all words (Yong Wenming, 2009, p. 133). Prepositions are polysemous words, and the wrong understanding of the meaning of prepositions is often considered as the reason which causes English learners’ ineffective application of the language and affects their listening, reading, writing and expression skills, which is a major difficulty for English learners.

As the main language in the field of medicine, medical English is also an important branch of English for science and technology, which is characterized by highly specialized content and standardized language structure. English titles of medical papers often need to cover the core of the content, so that people can be clear at a glance. According to research conducted by experts in advertising, five times as many readers read the full text only when reading the headline (Liu Mingdong, 2001, p. 43). It is conceivable that the title is of great importance to an article. Therefore, the title in an article is shown in an effective way, certainly improving the quality of the whole article. Therefore, the preposition plays a key role in the title of a medical English paper.

In recent years, with the development of the Belt and Road Initiative, Traditional Chinese Medicine (TCM) has attracted wide attention in the international community, which also sets off a “heat of acupuncture” in the international community. For example, articles related to TCM have become an important window for foreign countries to understand TCM. The translation of the title of a TCM article is also related to the reading of the whole article, and even related to foreigners’ cognition of a certain area of TCM. Therefore, this paper will study the translation of prepositions in the titles of 4 Chinese core journals related to acupuncture and moxibustion, so as to provide reference for future medical writers to use prepositions correctly and improve the quality of their articles.

## 2. Research methods

In this study, four TCM acupuncture journals with an impact factor equal to 1.000 were selected from China Hospital Knowledge Database (CHKD): *Acupuncture Research*, *Clinical Journal of Acupuncture and Moxibustion*, *Shanghai Journal of Acupuncture and Moxibustion*, and *China Acupuncture and Moxibustion*. Then, the English titles of five issues of each journal are extracted and the usage of prepositions in them is analyzed. The results are as follows:

Table 1

Prepositions	Count	Percentage (%)
of	617	40.12
in	256	16.64
on	222	14.43
with	159	10.34
for	124	8.06
at	48	3.12
by	42	2.73
after	33	2.15
between	10	0.65
from	9	0.59
Due to	9	0.59
during	4	0.26
past	2	0.13
through	1	0.03
over	1	0.03
As for	1	0.03

Then, based on the semantic analysis, the five most frequently-used prepositions, “of”, “in”, “on”, “with” and “for” will be discussed. At the same time, their same collocation is explored from the perspective of usage.

## 3. Research on the five most frequently-used prepositions

### 3.1 Of

The preposition “of” is one of the most common prepositions. In the Oxford Advanced English-Chinese Dictionary (7th edition), there are 13 usages of the preposition “of” listed. It is often used as an adjective, verb and noun.

The preposition “of” can be used in the following aspects:

1) of + n. (acupoints/vessels)

Example: ①Effect of Electroacupuncture Stimulation of Specificity and Specificity (cV8); ② Specificity of Specificity and Specificity (cV8) Sensitized Acupoints on Bowel Dysfunction in Rats with Diarrhea-predominant Irritable Bowel Syndrome.

In the example ①, “specificity of Shenque (CV8)”, the preposition “of” means “belonging to (something); about (something)”, is a possessive relationship, meaning “the character of Shenque point”. In example ②, “electroacupuncture stimulation of sensitized acupoints” is translated into dianzhenminhuaxuewei, in which “stimulation” is a noun with the property of a verb, and “acupoints” is the recipient of the action. So, the preposition “of” helps build a verb-object relationship.

2) of + n. (recipient/symptom)

Example: ①Effect of Acupoint Injection on Eosinophil Counts, Pprotein and mRNA Expressions of Eotaxin in Nasal Mucosa of Allergic Rhinitis Rats. ②Clinical Observation of Migraine Treated by Needling Specific Points along Shaoyang Meridian.

In the example ① “Nasal Mucosa of Allergic Rhinitis Rats”, the preposition “of” means “part of (something)”, that is, the nasal mucosa is a part of the allergic rhinitis mice, and the nasal mucosa, as a receptor, suffer from the allergic rhinitis. In the example ②, “Clinical Observation of Migraine” covers a noun of “observation” which becomes a part of the verb-object connected by the preposition

“of”.

3) of + n. (an instrument, device, or technique)

Example: ①Effect of Point-moxibustion and Electroacupuncture on the Expression of Endothelial Nitric Oxide Synthase mRNA and Angiotensin 2 mRNA in Gastric Antrum in Diabetic Gastroparesis Rats. ②Efficacy of Acupoint Catgut Embedding Combined with Ginger on Chronic Fatigue Syndrome of Spleen-kidney Yang and Its Effects on T Lymphocyte Subjects and Activity of NK Cell.

In the above cases, the preposition “of” connects “effect/efficacy” with traditional Chinese acupuncture and moxibustion, meaning “belonging to; related”, that is, the therapeutic effect is generated by point moxibustion and electric acupuncture, acupoint embedding thread. In this way, the core of the paper is shown clearly, that is, a study of the effects of a certain type of treatment.

### 3.2 In

The preposition “in” is also common in the medical field. According to statistics, the frequency of prepositions “in” cardiology articles accounts for 16.1% of all the frequency of prepositions. Its importance is reflected in its high frequency of use. Among them, the most basic use of the preposition “in” is to indicate space and time, so is its prepositional phrase. Also, The preposition “in” is followed by a noun indicating methods, states, ways, etc. For example, “Heat sets these particles in random motion” or “The case is half a cubic meter in volume”. In addition, the preposition “in” appears in some fixed collocations as adverbials, such as “in the light of” and “in terms of”.

The preposition “in” can be used in the following ways in the title:

1) in + n. (location/place)

Example: The current situation of acupuncture definition in international organization and legislation of some countries. In this example, the preposition “in” with the noun of place of “international organization and legislation of some countries” serves as an adverbial of place.

2) in + n. (receptor)

Example: Effect of “Xingnao Kaiqiao Zhenfa”(Acupuncture Technique for Restoring Consciousness) Combined with Rehabilitation Training on Nerve Repair and Expression of Growth-associated Protein-43 of Peri-ischemic Cortex in Ischemic Stroke Rats. In this example, the preposition “in” is paired with the receptor “stroke rats” to describe a treatment for a particular type of receptor.

3) in + n. (treatment)/adj. + in + n. (treatment)

Example: ①Therapeutic Observation of Acupuncture at Guangming (GB37) and Diwuhui (GB42) in Treating Dry Eye due to Different Syndromes. ②Is Acupuncture Ineffective in Treating Infertility Associated with Polycystic Ovary Syndrome?

In these two examples, the preposition “in” is connected with “treating”, meaning “about; in terms of...”. Besides, “be ineffective in” indicates the collocation of preposition “in” with adjectives, serving as the adjective complement.

### 3.3 On

A survey showed that the preposition “on” accounted for 84.5% of all the samples (Minghong, 2015, pp. 87-91). In addition, the common meanings of the preposition “on” mainly include time, state, space/place, correlation and so on.

Among the selected titles, the preposition “on” ranks the third in frequency of use, and its use forms are as follows:

1) on + n. (technique)

Example: Research Progress of Acupuncture and Moxibustion in the Treatment of Primary Dysmenorrhea Based on Metabonomics Technique.

In this example, there is a fixed collocation “based on...”, standing for “something as support”, that is, on the basis of metabonomics techniques, acupuncture is used to treat primary dysmenorrhea.

## 2) on + research content

Example: Clinical Research on Double-needle Winding and Pulling Combined with Electroacupuncture Therapy in Treating Scapulohumeral Periarthritis.

In this example, the preposition “on” means “with...; related to...”. That means the preposition “on” is followed by the clinical study related to the treatment of periarthritis of shoulder by electroacupuncture with needle wrapping.

## 3) on + n. (acupoints/vessels)

Example: Randomized Controlled Trials of Infantile Anorexia by the Treatment of Tuina on Eight Points around GV9 Combined with Zinc Gluconate.

In this example, the preposition “on” is followed by “eight points”. Massage is conducted on the eight points, the surface of the body, to stimulate the corresponding acupoints. Therefore, this kind of use of preposition “on” means “at a certain position; around a part”.

### 3.4 With

Generally, the preposition “with” means various relationships, connections, methods, approaches, etc; to indicate a logical relationship; Used in idiom (Ma Xiudi, 1990, pp. 85-90). In the titles studied in this paper, the use of the preposition “with” is as follows:

## 1) with + n. (equipment/technique)

Example: Efficacy of Stage Treatment with Acupuncture plus Intermediate Frequency for Bell’s Palsy and Its Effect on Serum NO Content.

In this case, the preposition “with” is connected to “Acupuncture plus Intermediate Frequency”, interpreted as the use of acupuncture combined with intermediate frequency treatment of Bell’s facial paralysis, indicating an adverbial of manner.

## 2) verb + with + n. (treatment method)

Example: Clinical Observation of Heat-sensitive Moxibustion Combined with Kegel Exercise Therapy for Female Stress Urinary Incontinence. In this example, “with” means “something together”, that is, thermo-sensitive moxibustion is combined with Kegel exercise therapy to treat female stress urinary incontinence.

## 3) with + n. (symptom)

Example: Effect of Electroacupuncture at “Zusanli” (ST 36) on Vimentin (A Kind of Cytoskeleton Protein Related to Smooth Muscle Contraction) in Rats with Diarrhea-predominant Irritable Bowel Syndrome.

In this example, the preposition “with” from “Rats with Diarrhea-predominant Irritable Bowel Syndrome” means “suffer from”.

### 3.5 For

Usually, the preposition “for” indicates some purpose or distance; be the cause of sth; to connect a time period; for someone (Wang Minzhong, 1994, p. 8).

The usage form and significance of the preposition “for” in titles related to TCM acupuncture mainly include the following aspects:

## 1) for + n. (purpose)

Example: Effect of “Xingnao Kaiqiao Zhenfa”(Acupuncture Technique for Restoring Consciousness) Combined with Rehabilitation Training on Nerve Repair and Expression of Growth-associated Protein-43 of Peri-ischemic Cortex in Ischemic Stroke Rats. In this example, “for restoring consciousness” is described as the purpose of treatment, in which “for” serves as a connection with purpose as adverbs of purpose.

## 2) for + n. (symptom)

Example: Compliance Control Strategy in the Practical Randomized Controlled Trial Study of

Electroacupuncture Combined with Behavior Control for Overweight and Simple Obesity. In this example, the preposition “for” refers to “be specific to”, manifesting the subject of the article is overweight and general obese.

#### 4. Discussion

Through the classification analysis, we have a preliminary understanding of the five high-frequency prepositions in the titles of acupuncture and moxibustion. Now we will discuss their high frequency of usage and collocation significance in the titles of acupuncture and moxibustion papers.

Among the five high-frequency prepositions, “on” and “in” represent “space” and “position”, which are endowed with a spatial characteristic. This is also related to the treatment rules of acupuncture and moxibustion. Acupuncture and moxibustion therapy is an external treatment, which completely relies on exogenous stimulation on some parts of the body to promote and stimulate the self-regulation function of the body, so as to realize the benign recovery of diseases from pathological imbalance to normal physiological state (Du Yuanhao, 2018, p. 650). It is a kind of exogenous treatment, the operation on the body surface. Therefore, prepositions “with” of spatial characteristics are frequently used in articles on acupuncture and moxibustion, which also shows the corresponding characteristics of interdisciplinary between English as a language and acupuncture and moxibustion as the medicine science.

In addition, the high frequency of the usage of other prepositions is related to the presence of prepositions in the title. In most cases, the English translation of the title cannot be literally translated according to the Chinese title, and sometimes the word-by-word translation will lead to unclear or wordy meaning. Therefore, a precise usage of prepositions can avoid these problems and effectively obtain the title of simplicity and clarity. Readers can be clear about the core information of the whole research through the title.

The collocation of prepositions in the title of articles on acupuncture and moxibustion is very concentrated. “of”, “on”, “in” and “with” have three types respectively, and “for” has two types, and the meaning is also very concentrated. Each type of collocation expresses the same meaning “as the basis, support”; “on + specific research content”, meaning “with...; related”; “on + acupoints/vessels”, meaning “surrounding some parts”. Therefore, it is obvious that the collocation and meaning of each preposition have certain rules to follow.

#### 5. Conclusion

All in all, the correlation between the use of high-frequency prepositions in articles on acupuncture and moxibustion and the subject of acupuncture and moxibustion reflects that in translation, the target language will carry the subject characteristics of the field involved in the target language. Secondly, the systematic classification of translation words in professional fields and the establishment of a professional corpus are conducive to grasping certain rules of usage, accurately selecting words in translation and improving the quality of translation. Therefore, for TCM workers to understand the characteristics of words used in the English translation of acupuncture titles, it will be helpful for them to choose the right words, improve the linguistic accuracy of the English translation of acupuncture papers. More foreigners are supposed to have a better understanding of TCM, and promote the internationalization of TCM.

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