

## Lexical Cohesion in Modern & Old Medical Persian Texts

*Somayeh Karami<sup>1</sup>*

### **Abstract**

The present study intended to investigate the frequency of four different types of lexical cohesive devices, namely repetition, synonymy, hyponymy and collocation in modern and old medical Persian texts. In particular, it aims at investigating the density of lexical ties in each text type. The sample selected for this study consisted of an old and a modern medical Persian texts about headaches. Each text was comprised of ten paragraphs. After detecting the types and the numbers of lexical ties for each sentence, the percentages of different cohesive devices utilized in each text type were computed. Moreover, lexical cohesion densities of the two texts were determined. A close examination of the results showed that old medical Persian texts are denser than modern medical Persian texts in terms of repetition and synonymy while the latter is denser in terms of collocation.

### **Introduction**

Language is a phenomenon the components of which are closely interrelated. It consists of variables such as coherence and cohesion which contribute to the integrity of the components of communication.

A text or discourse is not just a set of sentences, each on some random topic. Rather, the sentences and phrases of any sensible text will each tend to be about the same things -- that is, the text will have a quality of unity. This is the property of cohesion-- the sentences "stick together" to function as a whole. Cohesion is achieved through back-reference, conjunction, and semantic word relations. As aptly stated by Halliday and Hasan (1976), it is a way of getting text to "hang together as a whole." Their work on cohesion has underscored its importance as an indicator of text unity. Lexical cohesion is the cohesion that arises from semantic

---

<sup>1</sup> - Islamic Azad University, Khorasgan Branch

Proceedings of The Research in Language Science

relationships between words. All that is required is that there is some recognizable relation between the words.

Cohesion is the grammatical and lexical relationship within a text or sentence. It is the links that hold a text together and give it meaning. There are two main types of cohesion: grammatical, referring to the structural content, and lexical, referring to the language content of the piece. Halliday and Hasan identify five general categories of cohesive devices that create coherence in texts: reference, ellipsis, substitution, lexical cohesion, and conjunction.

The aim of this study is contrasting the degree of utilization of cohesive devices in old and modern versions of medical Persian texts.

### **Source of Data**

The sample selected for this study consists of two medical texts about headache. One of them is in old Persian and the other is in modern Persian. Each text comprises 10 paragraphs. The old version is taken from Ibn Sina's(Avicenna) The Canon of Medicine(The Laws of Feelings) and the modern text is taken from an online medical journal.

### **Method of Analysis**

For the analysis of lexical cohesion in old and modern medical texts in Persian, repetition, synonymy, hyponymy, and collocation are considered as major types of lexical cohesion in this study. Although such devices are identifiable among the verbs too, this study is devoted to the investigation lexical devices among the content words.

#### **Repetition(R):**

Repetition is just the simple repetition of a word, within a sentence, with no particular placement of the word.

Ex: "today, as never before, the fates of men are so intimately linked to one another that a disaster for one is a disaster for everybody"

#### **Synonymy(S):**

Synonyms are different words with identical or very similar meanings.

Ex: petty crime and misdemeanor

#### **Collocation(C):**

Collocation refers to lexical items that regularly tend to appear in similar environments.

Ex: fully aware, bars of soap

#### **Hyponymy (H):**

Lexical Cohesion in Modern & Old Medical .....

The relation between specific and general words when the former is included in latter .

Ex: Dog is a kind of animal.

In this study, the lexical cohesive ties are detected for any sentence and the number of lexical ties for each sentence is determined.

For contrastive analysis, each tie is categorized under the related type of lexical cohesive device. Then, the percentages of categories of lexical cohesion utilized in old and modern texts are computed and the results are compared and contrasted between the two groups. Finally, the obtained densities of old and modern medical Persian texts are compared.

### **An Analysis of Data and Results**

The types and the numbers of lexical ties for each sentence are detected. They are presented in the appendix. The percentages of lexical cohesive devices utilized in each text are given in the following table.

The frequency of lexical cohesive devices in old and modern medical Persian texts

Type of lexical cohesion	R	S	C	H
Old text	61.97	28.16	9.85	0
Modern text	52.9	17.5	27.5	2.5

R=repetition S=synonymy C=collocation H=hyponymy

It can be seen in the table that the most frequently used cohesive device in each text is repetition. The second frequent device is synonymy. The third one is collocation and the least frequent device is hyponymy.

On the whole, the trend of both old and modern texts is toward repetition, since the highest average percentage in each group refers to repetition, but it is more frequently used in the old text. Besides, the results show that the old text has more synonymous items than the modern text. On the other hand, the modern text exhibits a stronger tendency toward the use of collocation than the old text. Finally, hyponymy does not play an outstanding role in either text.

Lexical cohesion densities of the two texts are determined through the division of the total number of lexical ties in each text by the total number of sentences in that text. The obtained figures are 1.86 and 1.33 for old and modern texts respectively.



## Conclusion

Generally speaking, the differences in the cases of repetition, synonymy and collocation are statistically significant. Therefore, it can be concluded that repetition and synonymy are utilized more frequently in the old text than the modern one. On the other hand, collocation is more frequent in the modern text.

As a result, old medical Persian texts are denser than modern medical Persian texts in the case of repetition and synonymy, but the latter is denser in terms of collocation.

The difference between the percentages of occurrence belonging to the use of hyponymy in the two texts is not outstanding and this result is comparable to the study done by Dr.Yarmohammadi in "Lexical Cohesion in English and Persian in Contrast". According to the results of his study Persian texts are not tight in terms of hyponymy.

## Suggestion for Further Research

1- Another research can be done to determine the extent to which modern Persian texts are like modern English texts.

2- One can investigate the difference between old and modern Persian texts in other fields such as politics, religion,...

## References

- Amid,H.(1363). *Amid Persian Dictionary*  
Avicenna. *The Canon of Medicine*  
Halliday, Michael and Hasan, Ruqaiya(1976). *Cohesion in English*. Longman Group.  
Yarmohammadi,L.(1995).*Fifteen Articles in Contrastive Linguistics and the Structure of Persian*. Rahnama publication  
<http://www.wikipedia.org/>  
<http://teberooz.blogfa.com/post-9.aspx>  
<http://dastjerdi.com/headache.htm>

Lexical Cohesion in Modern & Old Medical .....

S.No	No.Lex.Ts	Co.It.	TP.
2	1	Esteres	S
3	1	Bimari	R
4	3	Sardard Xosh-xim Elal	R R R
5	2	Sardard Cheshmi	R R
6	1	Sardard	R
8	6	Raft-o-amad Mohit Aloodegi Na-monaseb Sar-o-seda Fak-o-dandan	C R R S C C
10	1	Sardard	R
11	2	Sardard Darman-o-pishgiri	R C
12	2	Migren Nafar	H R
14	1	Tahavo-va-estefraq	C
16	3	Sikl-e-mahane Ezterab Taqir-e-mohit	C S R
17	2	Sardard Maqz-o-asab	R C
18	1	Cheshm	R
19	4	Cheshm Noor Qermezi Sar-o-seda	R R S C
20	2	Sardard Tashdid	R S
21	1	Cheshm	R
22	3	Sharh-e-hal Shoroo Sardard	C S R
23	2	Sardard Bar	R S
25	1	Pors-o-joo	C
29	1	Favasel-e-zamani	C

S.No=Sentence Number

Co.It.=Cohesive items

Lex.Ts.=Lexical ties

TP.=Type

Old Medical Text

Proceedings of The Research in Language Science

S.No	No.Lex.Ts	Co.It.	TP.
1	5	Sar Angize Angize Dard Tafracol-etesal	R S R R C
2	2	Sabab Taqr-e-mazaj	R R
3	1	Soo-e-mazaj	C
4	2	Madde Tafracol-etesal	R C
5	1	Varam	
6	4	Maqz Parde Abshame Kase-ye-sar	R S R C
7	2	Andam Moshtarak	R R
10	1	Sar	R
11	1	Andam	R
12	1	Dard	R
13	2	Ozv Nobat	S S
14	2	Dard Mede	R R
15	3	Nobat Tab Chand-o-choon	R R C
16	2	Sabab No-zohoor	S S
17	2	Xomar Sardard	R R
19	3	Angize Sabaqe-dar Mandegar	R S S
21	5	Tab-e-doshvar Bimari Alamat Xab-aludegi Sosti	S R S S S
22	1	Sar	R
24	1	Sar	R
25	1	Sar	R
26	4	Sar Sardard Sardard-e-beize Xood	R R R R

Lexical Cohesion in Modern & Old Medical .....

27	1	Sardard	R
28	3	Sheddat Jandane Ostoxan	S R R
29	4	Sardard Halat Zaeef Payande	R R S S
31	2	Maqz sardard	R R
32	1	Sardard-avar	R
33	2	Natavani-e-maqz Soo-e-mazaj	R C
35	4	Halat Dard-e-sar Rooy-avard Atraf	R S R R
36	3	Sardard Paydar Azar	S S S
37	2	Sardard Sekseke	R S
38	3	Sardard-e-mozmen Varam Seft-o-sakht	R R C

S.No=Sentence Number

Co.It.=Cohesive items

Lex.Ts.=Lexical ties

TP.=Type