

LEXICAL COHESION IN SADEGH HEDAYAT'S LETTERS: THE EFFECT OF BIPOLAR MOOD DISORDER

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Abstract

This paper makes an attempt to investigate the effect of bipolar mood disorder on the basis of using the lexical cohesion elements (that is, repetition, synonymy, antonymy, hyponymy, and collocation) in a case study approach based on the fact that approximately one percent of people suffer from this kind of affective disorder. Specifically, a large number of artists are afflicted by the very disorder presumably due to their creativity. The private letters of Sadegh Hedayat, mostly known as an Iranian eminent writer suffering from bipolar mood disorder, to Shahid Nourai, one of his friends, are selected as the material of the study. The addressee is kept fixed noticeably to remove the effective linguistic features. Sadegh Hedayat's letters have been studied regarding mentioned linguistic elements in terms of two major bipolar mood disorder episodes (that is to say, hypomanic and depressive). In the study, all the letters related to hypomanic and depressive episodes are investigated using the elements of lexical cohesion. Furthermore, all the words on the basis of the elements with respect to various ties, i.e. immediate, mediate, and remote, are counted and the averages are evaluated using SPSS with the aim of finding any noteworthy result to discover whether specific psychological mood affects the use of certain lexical cohesion elements or not. Moreover, it explores whether there is any significant difference between bipolar mood disorder and schizophrenia on the basis of previous studies. The statistical analysis shows a highly significant difference concerning antonymy and hyponymy between hypomania and depression. No significant difference is found with respect to repetition, synonymy, and collocation. In addition, the results suggest that the text analyzed in the research is cohesive as regards bipolar mood disorder in contrast to those studies conducted related to schizophrenia.

Keywords: antonymy, bipolar mood disorder, hyponymy, lexical cohesion, schizophrenia.

1. INTRODUCTION

Today, about one percent of individuals suffer from the bipolar mood disorder. Specifically, a large number of artists are afflicted by the very disorder, presumably due to their creativity (for example, see Jamison, 1995 & Jones et al., 2002).

Although bipolar mood disorder is rampant, there is dramatically little research with respect to its relation to the concept of language. Given the fact that language is the reflection of human's mind and it is of the essences not to overlook the manner people use language in any type (i.e. written or oral) being the mirror of their cognitive and affective realm, any study associated with linguistic characteristics of the disorder (for example, semantics, syntax, pragmatics, morphology, and discourse) can pay a regular contribution to a

developing clinical status in terms of bipolar mood disorder .

Bipolar mood disorder is an enduring affective disorder dividing into various types. Based on the fact that this disorder includes the first type of Bipolarity, that is to say, bipolar 1, and the second kind of the disorder, i.e. bipolar 2, both differing with respect to the concepts of mania and hypomania respectively, patients experience psychotic status in mania despite hypomania. Furthermore, the mentioned types show depressive episodes, additionally.

Irritated mood, heightened reality, elation, grandiosity, overwhelming emotions, the flight of ideas, excitement and those related to activities and sleeping can be mentioned as the symptoms of hypomania and mania, psychologically. On the other hand, the depressive episode contains lack of interest, thoughts of death and suicide, fatigue and lack of energy, sense of worthlessness, difficulty in making decisions, pessimistic ideas and hopelessness (Sadock & Sadock, 2010). Moreover, 40% of bipolar people suffer from the mixed episode, a combination of hypomania or mania and depression concurrently (Miklowitz, 2001).

As yet, little research has been conducted as regards language and bipolar mood disorder. For example, Landis (1964), Sanfillippo and Hoffman (1999), Clark et al. (2001) and Sadock and Sadock (2010) stated some linguistic characteristics of the disorder, for instance, ambiguous referent, that is manic patients use puns and unclear reference to facilitate themselves to stay in a goal-directed discourse, tangentiality that means shifting from one topic to another to reach a goal-directed conversation, pressured speech, clang association, that is the arrangement of words chosen due to resemblance in sound and rhyme, flight of ideas that means topic shift is affected by pressure of speech in common with wordplay, and loss of inhibition related to easily using social taboos. On the other hand, poverty of speech and persistent thoughts reflected in language are seen as linguistic signs of depression .

More recently, Esmaeelpour and Sasani (2016) investigated that Sadeh Hedayat, one of the most popular writers in Iran, probably suffered from bipolar mood disorder on the basis of linguistic criteria, i.e. semantic and pragmatic. They found four episodes associated with bipolar mood disorder, that is depressive, hypomanic, euthymic, and mixed, in 82 personal letters of Sadeh Hedayat regarding the criteria. In addition, they introduced more linguistic elements with respect to those elements not mentioned in psychological studies. Furthermore, Esmaeelpour et al. (2017) explored Sadeh Hedayat's letters morphologically on the basis of bipolar mood disorder. They investigated some negative affixes concerning depressive, mixed, and hypomanic episode .

Psycholinguistically, Goss (2006) mentioned:

Excessive Levels of Activation in Discourse Planning: This phenomenon occurs only in mania and hypomania. Manic discourse is often incomprehensible, mostly because of the speaker shifts back and forth from related topics. The overall discourse structure is relatively coherent and goal-directed, but the speaker focuses on too many levels or aspects of her thoughts simultaneously. In such cases, verbal competence is very high, in the sense that the speaker can juggle multiple levels of a discourse at once

Thomas (1995) illustrated one of the most important differences between schizophrenic speech and bipolar mood disorder being the lack of cohesion in schizophrenia. Based on Halliday and Hasan (1976), cohesion refers to semantic relations that unite linguistic elements within a text. Cohesion is related to the lexicogrammatical system, and five major types of cohesive ties have been identified: reference, substitution, ellipsis, conjunction, and lexical cohesion. Ragin and Oltmanns (1986 & 1987) analyzed lexical cohesion in three groups of thought-disordered patients (that is, patients with schizophrenia, mania, and schizoaffective disorder). The result showed that for the acute phase, the schizophrenic patients showed a meaningfully reduced amount of lexical cohesion within clauses, in comparison with both the manic and schizoaffective groups.

The present research is an attempt to reveal the lexical cohesion given bipolar mood episodes in Sadeh Hedayat's letters, specifically hypomanic and depressive phases. Sadeh Hedayat was diagnosed as a bipolar patient in psychiatric point of view based on his biography, medical records, letters exchanged between him and his friends, etc. (Fadai, 2009). So far, however, there has been little discussion about lexical cohesion and bipolar mood disorder conscientiously. The purpose of this research is to explore lexical cohesion clinically in bipolar mood disorder to show whether Hedayat, presumably as a bipolar individual, considerably has lexical cohesion in depressive and hypomanic episodes and whether there is a dramatic difference in terms of lexical cohesion regarding the episodes when it comes to Sadeh Hedayat.

Functional linguistics is considered as one of the most dominant approaches in today's theoretical linguistics considerably focusing on linguistic function. Functional linguists subscribe to the idea that language is a medium used for social interaction and text analysis regarding context. Linguistic units and structural

relations are highly connected to context leading to meaning (Halliday, 1985). On the basis of the fact, they put their emphasis on language use.

Theory of text cohesion and coherency is based on the relation between meaning and text. This is one of the branches of discourse analysis investigating text. A text should be cohesive even if it is a small language unit. Cohesion plays a meaningfully important role in a text structure. In Halliday's point of view, cohesion is a basic concept showing the meaning relations in text and defining it as a text (Halliday & Hasan, 1976).

Halliday (1985) mentioned three metafunctions for language resulting from his viewpoint that language structure is close to its function and use. Based on the fact, each unit of language is meaningful and functional. Consequently, Ideational, Interpersonal and Textual metafunctions can be considered in Halliday's perspective.

Regarding textual metafunction, a text is highly coherent, consisting of some sentences, divided into two parts (that is, structure and cohesion). Among sentences in the text, there is a distinguished relation owing to textual cohesion (Halliday & Hasan, 1976). Halliday strongly believes that textual cohesion ties with grammatical part of the text together with lexical units. As a result, there are two types of cohesion (i.e. grammatical and lexical). This research concentrates on lexical cohesion which is a medium to convey the writer's thought and language. Moreover, it plays a vital role in having a coherent text based on the fact that meaning directly stems from words.

The meaning system in terms of words through a text can be called lexical cohesion. The most crucial elements of lexical cohesion can be divided into two parts (Halliday & Hasan, 1976). The first one is reiteration including four elements as well (i.e. repetition, synonymy, antonymy, and hyponymy). The second lexical cohesion element is associated with the connection between words in a similar semantic field (that is, collocation).

2. METHODOLOGY

2.1 Participants

A case study method is selected to perform an in-depth study of the relation between affective disorder and the manner of using lexical cohesion elements in order to have a cohesive text, written type of language is considered in this research, based on a specific mood (i.e. hypomanic and depressive) of an individual suffering from bipolar mood disorder. Sadegh Hedayat is selected as the subject of the research hypothetically known as a bipolar patient by Esmaeelpour and Sasani (2016) linguistically and Fadai (2009) in a psychiatric point of view.

Pakdaman (2000) stated that Sadegh Hedayat was 43 when he began to write the letters to Shahid Nourai (in 1946). In actual fact, he was born in 1903 and he committed the suicide in 1951. What is more, the writing of the letters was finished in 1950. The letters were written with a variety of involvements of bipolar mood disorder episodes (see, Esmaeelpour and Sasani, 2016).

2.2. Materials

The private letters of Sadegh Hedayat to Shahid Nourai (Pakdaman, 2000) were chosen as the material of the study. The addressee is kept fixed remarkably to remove the effective linguistic features. Esmaeelpour and Sasani (2016) divided his letters into four episodes including 40 letters associated with hypomania, 36 letters regarding the mixed episode, 5 letters related to euthymia and 1 letter concerning depression. The purpose of this research is to analyze each letter based on five lexical cohesion elements introduced in the introduction in terms of two bipolar mood disorder episodes (i.e. hypomanic and depressive).

2.3. Procedure

In a pilot study, it was seen that there was a significant difference among lexical cohesion elements, i.e. repetition, synonymy, antonymy, hyponymy, and collocation, used in certain episodes (that is, hypomanic and depressive) by Sadegh Hedayat suffering from the bipolar mood disorder. In fact, the letters related to hypomanic and depressive episodes, recognized by Esmaeelpour and Sasani (2016) via linguistic tools, were studied on the basis of the word and semantic features with a focus on lexical cohesion elements in different kinds of ties, to be exact immediate, mediate, and remote.

In the investigation, all letters associated with hypomania and depression are carried out using the elements of lexical cohesion, and all related words based on the mentioned elements in terms of various ties, namely immediate, mediate, and remote, were counted and the averages were analyzed using SPSS in order to find any significant result to discover whether specific psychological mood affects the use of certain lexical cohesion elements or not, and to find out whether there is any significant difference between schizophrenia

as a mental disease with loss of cohesion, and bipolar mood disorder as an affective one in a case and detailed study approach on the basis of Sadegh Hedayat's letters.

3. RESULTS

All five elements regarding lexical cohesion (that is, repetition, synonymy, antonymy, hyponymy, and collocation) discussed in literature associated with certain mood episode (i.e. hypomanic and depressive) were analyzed.

3.1. Depressive Episode

Letter 72 written in November 26th in 1949 which was the only letter seen in the depressive episode was studied on the basis of five elements regarding lexical cohesion. The results showed that 51.61 percent of all lexical cohesion elements was related to antonymy, such as past and future, cloudy and sunny, cold and warm, bad and good, and come and go, etc. Table 1 shows the percentage of lexical cohesion elements in depressive episode:

Table 1: the percentage of lexical cohesion elements in depressive episode

Repetition	Synonymy	Antonymy	Hyponymy	Collocation
19.35	6.45	51.61	6.45	16.12

The table below shows some examples regarding lexical cohesion in depressive episode:

Table 2: Some examples regarding lexical cohesion in depressive episode

Repetition	Synonymy	Antonymy	Hyponymy	Collocation
/ajande/ future	/naxoši, maraz/ sickness	/xub.o.bad/ Good and bad	/maraz, marizxane/ sickness, hospital	/delodamaq/ feeling

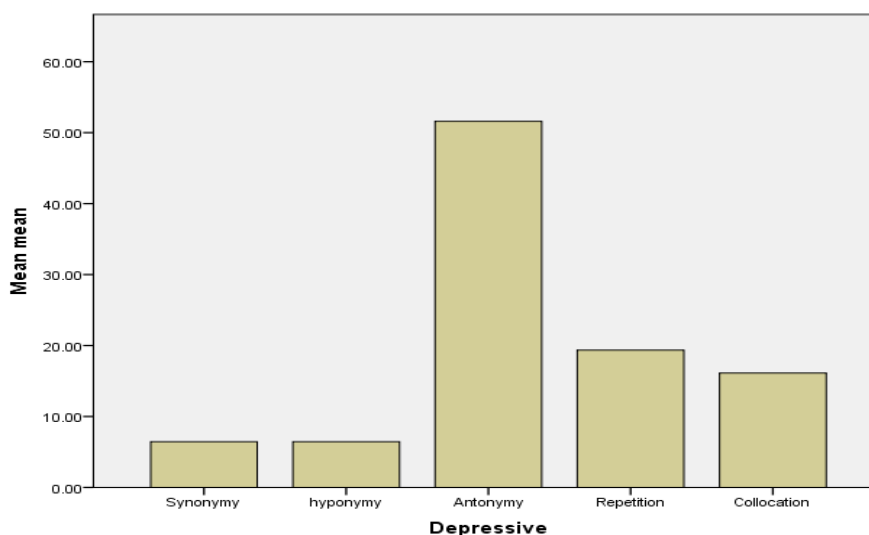


Fig. 1: The amount of each lexical cohesion element in depressive episode

3.2. Hypomanic Episode

All 40 letters related to the hypomanic episode were analyzed. 44 percent of the average of all lexical cohesion elements was related to hyponymy. Moreover, only 4 percent was associated with antonymy, i.e. as the least in hypomania with respect to five lexical cohesion elements, compared with depressive episode. It can be mentioned that hyponymy in depression was the least concerning all elements. The following table shows the percentage of the average of all the mentioned elements in terms of the hypomanic episode:

Table 3: the percentage of the average of all the mentioned elements in terms of the hypomanic episode

Repetition	Synonymy	Antonymy	Hyponymy	Collocation
28	12	4	44	12

The table below illustrates some examples concerning lexical cohesion elements in hypomanic episode:

Table 4: Some examples concerning lexical cohesion elements in hypomanic episode

Repetition	Synonymy	Antonymy	Hyponymy	Collocation
/ketab/ book	/sæhihosalem/ healthy	/Šædid/,/kæm/ much, a little	/kaqæzoketab/ paper	/ŠuxiŠuxi/ by fun

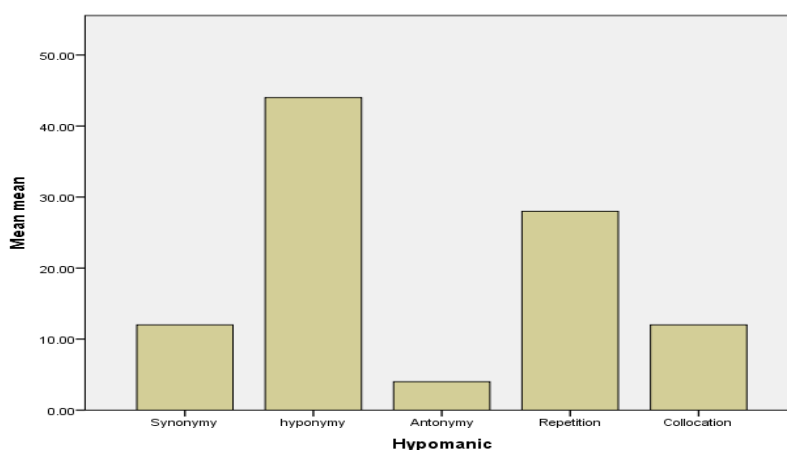


Fig. 2: The amount of each lexical cohesion element in the hypomanic episode

4. STATISTICS

The data were analyzed using SPSS after averaging the number of words with five elements of cohesion in the letters related to two types of episode associated with bipolar mood disorder (i.e. depression and hypomania). There is a highly significant difference given antonymy between hypomania and depression

based on ($\chi^2(df) = 56$ and $\alpha < 0.001$). Furthermore, there was a strongly significant difference given hyponymy between two conditions of the hypomanic and depressive episode on the basis of ($\chi^2(df) = 50$ and $\alpha < 0.001$).

Regarding repetition, there was not any significant difference on the basis of ($\chi^2(df) = 3$ and $\alpha > 0.05$)

between two episodes. The same difference can be observed ($\chi^2(df) = 2$ and $\alpha > 0.05$) in terms of synonymy the same as collocation that no significant difference was found.

5. DISCUSSION

The results indicate that in each type of mood in bipolar disorder (i.e. depressive and hypomanic) totally different lexical cohesion elements have been used. Surprisingly, Hedayat's texts were cohesive in each type of episode compared to people suffering from schizophrenia whose texts are not cohesive based on Thomas (1995) and Ragin and Oltmanns (1986, 1987)'s findings. According to the fact that bipolar people enjoy cohesion, it can be a turning point in the comparison between bipolar mood disorder and schizophrenia which people suffer from lack of cohesion elements in their different reflections of language. The results significantly confirm that the frequency of antonymy ties in the letter related to the depressive episode was dramatically high. Regarding psychological studies (e.g. Goss, 2006; Sadock and Sadock, 2010), bipolar people suffer from the sense of worthlessness, lack of interest, fatigue or loss of energy, depressed mood, and recurrent thoughts of death or suicide. In fact, Sadeqh Hedayat presumably suffering

from bipolar disorder appeared to use more negative words which contradict their positive ones resulting in a cohesive text using mostly antonymy as one of the lexical cohesion tools. As, Esmaeelpour et al. (2017) mentioned, even in affixes regarding the depressive episode, Sadegh Hedayat highly used negative affixes. Moreover, Esmaeelpour & Sasani (2016) claimed that he mostly used words with negative meaning (e.g. suicide and death). In this research, it is shown that Sadegh Hedayat considerably used words with antonyms. For example, past and future, good and bad, etc. Psycholinguistically, it is proved that Sadegh Hedayat experienced persistent contradictory thoughts reflected in language and he referred to positive words and their opposite ones, highlighted as the main notion, in his language contributing to text cohesion notably. It is highly worthy to say that in the hypomanic episode the antonymy was based on the level of the sentence as a whole, not a lexical unit but in depression, both of them were significant. As mentioned before, antonymy ties frequency was the least in the hypomanic episode and in comparison with depressive episode, it was highly low. This point is also proved in this article that Sadegh Hedayat mostly used hyponymy and repetition, respectively, in hypomanic episode stemming from pressured speech.

Based on the issue of Excessive Levels of Activation in Discourse Planning (Goss, 2006), occurring only in mania and hypomania, patient in hypomanic discourse mostly shifts back and forth from related topics. Still, the text is relatively cohesive and goal-directed, and the patient concentrates on too many levels or aspects of her thoughts simultaneously. Moreover, based on tangentiality (i.e. shifting from one subject to another reaching to a goal-directed conversation) mentioned before, high use of hyponymy can be considered in the hypomanic episode. Presumably, Hedayat used hyponymy to mention different subjects but in a goal-directed speech.

6. CONCLUSION

This research has examined Sadegh Hedayat's letters written in Persian to recognize the effect of psychological disorder, specifically bipolar mood disorder on lexical cohesion elements (that is, repetition, synonymy, antonymy, hyponymy, and collocation).

Lexical analysis investigation here revealed that Sadegh Hedayat has used different types of lexical cohesion elements based on his two different episodes (i.e. hypomanic and depressive). In fact, each type of mood in bipolar mood disorder has completely various effects on the use of lexical cohesion elements. In depressive episode, the frequency of antonymy ties in the letters was dramatically high resulting from his depressed mood, and recurrent contradictory thoughts. He used hyponymy in lexical cohesion tool resulting from excessive levels of activation in discourse planning, tangentially, pressured speech and topic shift.

Moreover, it is highly worthy to mention that Hedayat showed a cohesive written type of texts interestingly using various types of lexical cohesion elements based on the episodes. Yet, additional linguistic studies on different forms of written and spoken texts concerning bipolar mood disorder, and in other bipolar people are recommended to confirm the results.

REFERENCE LIST

- Clark, L., Iversen, S.D., Goodwin, G.M. (2001). "The Influence of Positive and Negative Mood States on Risk Taking, Verbal Fluency, and Salivary Cortisol". *Journal of Affective Disorders*, 63, 179-187.
- Esmaeelpour, E & Sasani F. (2016). "The Effect of Bipolar Mood Disorder on Sadegh Hedayat's Letters". *Journal of psycholinguistic research*, 45, 367-377. DOI: 10.1007/s10936-015-9355-5
- Esmaeelpour, E & Ghatreh, F, Nourbakhsh, M. (2017). "Linguistic Study of Negative Affixes in Sadegh Hedayat's Letters: The Effect of Bipolar Mood Disorder". *Journal of Psycholinguistic Research*, 46, 1385-1395. DOI: 10.1007/s10936-017-9503-1
- Fadai, F. (2009). "Sadegh Hedayat from the Descriptive Psychiatry Viewpoint". *Iranian Journal of Psychiatry and Behavioral Sciences*, 3, 19-26.
- Goss, J. (2006). "Poetics of Bipolar Disorder". *Pragmatics & Cognition*, 14, 83-110. DOI: 10.1075/pc.14.1.06gos
- Halliday, M. & R. Hasan (1976). *Cohesion in English*. London: Longman.
- Halliday, M. (1985). *An Introduction to Functional Grammar*. London: Edward Arnold.
- Jamison, K. R. (1995). "Manic-Depressive Illness and Creativity". *Scientific American*, 272, 125-134.

- Jones, S., Hayward P., & Lam D. (2002). *Coping with Bipolar Disorder: A Guide to Living with Manic Depression*, Oxford: Oneworld Publication.
- Landis, C. (1964). *Varieties of Psychopathological Experience*, New York: Rinehart and Winston.
- Miklowitz, D. J. (2001). "Bipolar Disorder", In D. Barlow (ed.), *Clinical Handbook of Psychological Disorders*. (pp. 523–562). NY: Guilford Press.
- Pakdaman, N. (2000). *Sadegh Hedayat: 82 Letters to Hasan Shahid Nourai* (2nd Ed.). Paris: Cheshmandaz (In Persian).
- Ragin AB, Oltmanns TF. (1986). "Lexical Cohesion and Formal Thought Disorder During and After Psychotic Episodes". *J Abnorm Psychol*, (95), 181-183. DOI: 10.1037/0021-843X.95.2.181
- Ragin AB, Oltmanns TF. (1987). "Communicability and Thought Disorder in Schizophrenics and Other Diagnostic Groups: A Follow-up Study". *Br Psychiatry*, 150, 494–500. DOI: 10.1192/bjp.150.4.494
- Sadock, B. J., & Sadock, V. A. (2010). *Kaplan Pocket Handbook of Clinical Psychiatry* (5th ed.). Baltimore: Lippincott Williams & Wilkins.
- Sanfillippo, L. C., & Hoffman, R.E. (1999). "Language Disorders in The Psychoses". In F. Fabbro (ed), *Concise Encyclopedia of Language Pathology* (pp. 400–407). Oxford: Elsevier Science.
- Thomas P. (1995). "Thought Disorder or Communication Disorder? Linguistic Science Provides a New Approach". *Br J Psychiatry*, (166), 287–290.