

An Investigation into Lexical Aspect of Persian Light Verbs: zadan, dādan and xordan Based on Huddleston and Pullum (2002)

Shapour Reza Berenjian¹  , Jalal Rahimian² 

¹ Faculty Member of department of computational linguistics with Regional Information Center for Science and Technology (RiCeST), Shiraz, Iran

² Professor of general linguistics at the department of foreign languages and linguistics, College of Humanities, Shiraz University, Shiraz, Iran

 **Corresponding Author:** Shapour Reza Berenjian, **E-mail:** berenjian@ricest.ac.ir

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ABSTRACT

The verb and its complement have their specific contributions to the meaning of predicate. Sometimes, the verb takes a more modest share than the complement in expressing the predicate; such verbs are referred to as light verbs. However, the degree of the lightness of the verbs is neither systematic nor predictable in verb constructions. We aim to investigate the lexical aspects of the Persian light verbs "zadan" (to hit), "dādan" (to give), and "xordan" (to eat) based on Huddleston and Pullum's Model (2002). There are many verbs that lend themselves to light verb constructions. The data are collected from the Updating Persian Corpus consisting of 48M words. To this end, we extracted all light verbs in the sentences stored on the Updating Persian Corpus using the AntConc software based on Mansouri's approach (2013). The sampling was done using random sampling method that has scientific validity and is generalizable. In random sampling, every entity of the population enjoys equal chance of inclusion in the sample. Then we analyzed the sentences containing light verbs in terms of the state and activity lexical aspects. The results were plotted in tables and figures with annotations of the verb features. For similar patterns, only one pattern was selected for further analysis. The light verb patterns were listed and analyzed in an inventory one by one. The study adopted a descriptive-analytical method and a corpus-based survey design. Descriptive research has both applied and basic aspects so that it leads to the discovery of facts and bodies of knowledge in an inductive way. An important characteristic of descriptive studies is that the researcher may not manipulate or control the status and role of variables. The researcher merely tends to study and describe what already exists. In this study, we used library research and content analysis methods.

1. Introduction

Light verbs have always been a topic of interest for literati, syntacticians and linguists because of their more applicability, productivity and effectiveness compared with simple verbs in Persian. In most syntactic compositions, the verb is the most important element as it affects other sentence elements. Unlike many other languages, Persian language has more compound verbs than simple ones. According to capacity theory, a verb is the structural center of gravity of a sentence as it determines the number of complements that may or should appear in a sentence. That is, the verb is often the core of the sentence while other elements are either verb complements or complements of verb complements (Tabibzadeh, 2006: 25). All compound verbs constitute a base and a verbal element. In compound verbs, the base is a grammatical role that manifests as a noun phrase (NP),

adjective phrase (AP) or prepositional phrase (PP). Verbal component, however, is almost bleached of meaning. These verbs are commonly referred to as light verbs (LV). Simple verbs that constitute the verbal element of a compound verb are verbs such as “kardan” (do), “šodan” (become), “dādan” (give), “zadan” (beat), “gereftan” (get) and “xordan” (eat). Sometimes, light verbs are interchangeable. For instance, “faryād zadan” and “faryād kardan” express the same meaning, i.e. to shout (Lazard, 2014). The base and verbal element are two distinct syntactic constructions that make up together to create the LV construction. There has been extensive research on compound and light verbs in Persian. However, a glance at previous studies proves the need for new research on the semantics and patterns of LVs. We hope to shed light on the lexical aspects of some Persian LVs.

The results of the present study may be used by linguists, syntacticians, and natural language processing (NLP) specialists to create Persian language tools and resources, translation machines, and syntactic and syllabic fragmentation software. The results may also prove useful in teaching Persian to non-Persian language learners.

1.1 Research objective

A glance at the syntax literature reveals that different researchers have addressed LVs from different aspects. However, some dimensions of Persian LVs have remained untouched especially in terms of lexical aspects. LV lexical aspects in Persian have not yet been addressed in research coherently. When studied in the light of state and activity concepts, LVs will reveal novel dimensions of their roles that are currently unnoticed.

Our cursory study shows that LVs “zadan”, “xordan”, and “dādan” are different specific features so that they may be used in different constructions. This study aims at an investigation into lexical aspects of constructions carrying three Persian light verbs: “zadan”, “xordan”, and “dādan”.

1.2 Significance of the study

As many scholars including Huddleston and Pullum (2002:290) contend, LVs have a smaller share than the verb complements in producing the predicate meaning. In example A below, the meaning of the predicate is completely conveyed by the lexical verb “did” (saw). In example B, however, the predicate meaning is conveyed through the NP “negāhi” (a look) while the verb “andāxt” (threw) has a smaller semantic share.

ostād takālif-e marā did.

The instructor saw my homework.

A) *ostād negāhi be takālif-e man andāxt.*

The instructor had a look at my homework.

Accordingly, the verbal construction in B is considered a light verb. The major goal of the present study is to such verbs in terms of their aspect. Since, tense and aspect are inter-related, we will also address aspect along with tense.

1.3 Research method

The research adopts a descriptive-analytical method and a survey design. Descriptive studies assume both applied and conceptual roles so that they can lead to the discovery of scientific facts and add to the body of knowledge in an inductive way. A key feature of such studies is that the researchers make no intervention in the status and role of variables. That is, they do not manipulate or control the variables but merely describe what already exists. In the present study, we adopted a library research approach to examine the texts and contents. We drew on the data stored in the Updating Persian Corpus to extract the sentences containing the verbs “zadan”, “dādan”, and “xordan” as LVs. The sampling was done using random sampling method that has scientific validity and is generalizable. In the random sampling method, all members of the population have an equal chance of inclusion in the sample. Subsequently, the sentences containing LVs were analyzed in terms of the state, activity, achievement, durative, and punctual lexical aspects. The results were illustrated for each LV in tables and figures containing values and annotations. The data were analyzed both quantitatively and qualitatively. We extracted and analyzed the sentences containing LVs. Overall, the study was conducted in six stages to address the lexical aspects of Persian LV constructions containing “zadan”, “dādan”, and “xordan”:

1. Extraction of the applicable samples of “zadan”, “dādan”, and “xordan” from the Updating Persian Corpus
2. Classification of the samples
3. The structural patterns of each LV were analyzed in terms of lexical aspects.
4. All verbs were studied in terms of their lexical aspects.
5. The data were entered into Excel software.
6. The data were statistically analyzed in Excel software.

The research instrument included the Updating Persian Corpus that is freely available online at <http://www.peikare.ir>. The sample size was calculated using the Krejcie and Morgan's table (1970). Following the data collection stage, we acquired a large bulk of data to use in the analysis process. Thus, we extracted and tabulated the data manually.

1.4 Research questions

1. How many LVs are transitive or intransitive?
2. What percentage of the verbs are LVs?
3. How many LVs are state, and how many are activity verbs?
4. How many activity LVs are process, and how many are punctual verbs?
5. How many LV constructions with "zadan", "dādan", and "xordan" have simple counterparts?
6. How many LVs are expandable?

1.5 Research Hypotheses

1. All LV constructions containing the verb "xordan" are intransitive.
2. All state verbs are transitive, and their complements are necessarily direct objects.
3. The verbal elements of LV constructions with "zadan", "dādan", and "xordan" often take nouns as complements.
4. LV constructions with "xordan" have more simple verb counterparts than other LV constructions.
5. Persian verbs often appear as intransitive verbs in the sentence. In other words, intransitive verbs are more frequently used than intransitive ones.
6. Activity verbs are used more frequently than state verbs.

2. Conceptual foundations of the research

2.1 Theoretical framework

The first and foremost objective of the research is to describe the principles of the lexical aspects of Persian LVs constructed with "zadan", "dādan", and "xordan" based on Huddleston and Pullum (2002). However, we do not aim to showcase or defend a theory of syntax. Since human languages are all complex, it is not viable to describe them without adhering to a theoretical framework. Any attempt at describing the Persian language without adhering to a theory of syntax poses a major problem because an effective description of the Persian language is only viable through generalization. In turn, generalization is only workable through following a theoretical framework.

Nowadays, it is necessary to follow a certain theoretical framework in scientific research; otherwise, the researcher may deviate from the standard path of research. Thus, theoretical framework is a signpost in the risky path of research. A study of the Cambridge Grammar of the English Language by Geoffrey K. Pullum and Rodney Huddleston (2002) fueled the motivation for this research. Although the book is written on English grammar, it has a certain research tendency both in general and in particular. That is, as the authors contend, the discussions of the book on syntax do not solely apply to the English language but address the universal aspects of syntax as well. Therefore, the book has a capacity to function as a research model. In the following section, we will provide a brief discussion on the theoretical aspects of the book as the conceptual framework of this research. In the discussion, we will review the distinction between universal and specific definitions of language as well as our theoretical perspective towards LV.

So far, linguists have provided various models and classifications of the basic concepts in syntax. For example, Falk (1993) addressed some of the fundamental concepts as achievements of the contemporary linguistics research in chapters 2, 3, 5, and 6 of her book. Akmajian et al. (1996) discussed some of fundamental syntactic concepts in sentence construction. Aarts (1997), Huddleston (1988), Fromkin et al. (1990), Rahimian (2002) and Katamba and Stonham (2012) have also discussed such concepts. Among all works on syntax, Huddleston and Pullum (2002) seems the best source to be used as a framework for the present study LVs in this study.

2.2 Persian verb and its types

Shariat (2005) defines verb as a word that denotes something or somebody’s action or state in the past, present, and/or future or at all times. A verb is a word that stands alone or in combination with its dependents to denote an action in a given time and that is an action that refers to another action (Farshidvard, 2003). Ahmadi Givi and Anvari (2006) write that a verb, usually coming at the end of the sentence, is inflectional so that it adopts various forms. The verb stands alone or in combination with dependents to signify an action, a state, an attribute, or imputation. The verb contains the concepts of person (first, second, third), number (singular and plural), and tense (past, present, future).

Khanlari (1987: V2, 115) discuss four types of verbs as follows: 1. simple verbs such as *āmadan* (come), 2. prefixal verbs such as *bar-āvardan* (raise), 3. compound verbs such as *šetāb kardan* (hurry), 4. phrasal verbs such as *be etmam resāndan* (finish).

Meshkatodini (2011:86) categorizes verbs as simple and linking verbs. He further distinguishes three types of linking verbs including prefixal, compound and copulas.

3. Literature review

The literature review section can be divided into two lines of discussion. First, there will be a discussion on the studies that have directly addressed LVs. Second, a body of literature will be discussed that has addressed other issues such as compound verbs but has marginally referred to LVs either directly or indirectly. In this section, we review some of the most important studies on the issue.

3.1 LV

According to Huddleston and Pullum (2002), LVs either bear no meaning or have a small share in denoting the predicate meaning. In these constructions, the main meaning of the predicate lies in the element that appears either as an NP in the form of a verb complement or as a non-verbal element of the compound verb.

LVs are typically known as a distinct type of syntactic categories that have a small semantic share in verb phrases. Jespersen (1940) coined the term LV. Mohamad and Karimi (1992) believe that LVs constitute the verbal element of Persian compound verbs. The verbal element is thought to be empty of meaning. They argue that only a noun – that has a theta relation to the verb – can appear in the complement structure, i.e. the structure that constitutes an NP core and its theta themes.

Brugman (2001) contends that LVs are constructions that bear little or no meaning in verb constructions. LVs are often regarded as a special category that, despite other language categories, has no clear syntactic and semantic features. This has prompted many linguists to overlook the syntax and semantics of LVs in their analyses. They often assign LVs the roles that contain the syntactic requirements of the sentence (Soltani et al., 2017).

Mansouri (2013) asserts that a verbal construction is an LV whenever the non-verbal element takes a bigger share than the verb in expressing the predicate. Like other verbs, LVs can account for different interpretations depending on other contextual elements. According to Mansouri (2013), the semantic lightness of LVs is variable so that it falls on a continuum. Neither is an LV semantically rich enough to be called a lexical verb, nor is it too weak to entail only non-semantic features. He believes that LVs stretch on a continuum of semantic emptiness such that they approximate lexical verbs on the one end and become almost completely semantically bleached on the other (Mansouri, 2013:95).

Absolutely lexical*-----*-----*-----*Absolutely light

zadan: (*mošt zadan*) (pāru zadan) (harf zadan) (telefon zadan)

Hit: (to punch) (To row) (To talk) (to telephone)

Sometimes, the semantic content may become so weak that the verb denotes more of time and aspect than meaning. However, the bleaching sometimes is not too strong to completely deplete the verb of meaning. Some researchers believe that the verbal element may become too empty of content to have a syntactic function only. However, as we shall see, an LV may never become completely empty of content. Karimi Doostan (2003) conducted an extensive study on the dependence or independence of LVs and non-verbal elements on a special argument structure. He cited examples such as “sokut kardan” (remain silent), “rahnamāee

kardan" (guide), and "ehda kardan" (donate) to emphasize that Persian LVs are not dependent on a specific argument structure. He maintains that a light verb is not merely a carrier of tense, person, and number features. Considering the polysemy of LVs in the Brugman's theoretical framework, Khanbaz (2013) studied the verbs "zadan" and "kešidan" whereas Amuzandeh and Bahrami (2012) examined the verbs "kardan" and "dāštan". They studied the polysemic relationship between LVs and their counterparts and showed how the pictorial schemas of heavy verbs are projected to their LV counterparts in compound verb constructions. Vahidian Kamyar and Omrani (2000) believe that other constituents may not be inserted between the verbal and non-verbal elements of the LV".

3.2 The structure of LVs

Karimi (2005) explains that the verbal element (LV in his words) and the complement (non-verbal element in his words) are generated separately but are combined later in the language syntax. Following their combination, they function as a sematic unit as does a lexical unit. He describes this as a conflicting property of Persian complex predicates.

3.3 Aspect

Aspect refers to sematic features that reflect the events in the real world. Two types of aspects may be distinguished: grammatical and lexical.

3.3.1 Grammatical aspect

The grammatical aspect denotes the difference between perfective and imperfective forms of the verb as follows:

A) "mädar-am qazä rä poxt" [perfective]

[My mother cooked the food.]

B) "Mädar-am qazä rä mi-pox" [imperfective]

[my mother used to cook food.]

3.4.2 Lexical aspect

Lexical aspect explains the inherent characteristics of the structure of a situation. In other words, it reveals the function of the verb in terms of concepts such as states and occurrences. Occurrences which are dynamic by nature are divided into processes and achievements. Achievements are punctual by nature. Processes which are always durative indicate either activities or accomplishments. Activities do not have any terminal point so they are called atelic. However, accomplishments have necessarily an ending point and accordingly, are called telic. Figure 3.1, taken from Huddleston and Pullum (2002:1180) reflect all these facts.

The difference between grammatical and lexical aspects is that the latter exists within the verb as a sematic feature while the former adopts these features through external and inflectional elements. Situations denoting a state entail a static situation (e.g. *the house is big, I know her*). Event indicate dynamic situations (e.g. *My father walked in the park*). Achievements occur instantaneously and lack any continuation. (e.g. *fall down*). Achievements can also be repetitive such as *cough*.

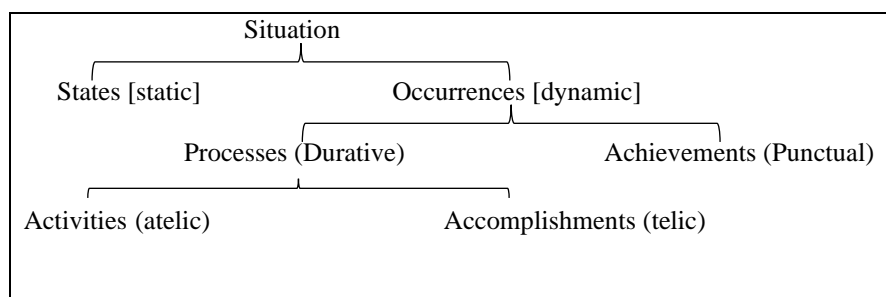


Figure 3.1. The structure of lexical aspect

4. Research method

There are a large number of verbal constructions that constitute LVs. The present study, focuses on the verbs "zadan", "dādan", and "xordan". To this end, we extracted all verbal constructions carrying "zadan", "dādan", and "xordan" from the Updating Persian Corpus using AntConc software based on Mansouri's approach (2013). We used the random sampling method that has scientific validity. This sampling method lends itself to generalizability and gives equal chance of selection to all members of the research population. Then we analyzed all sentences containing LVs in terms of the lexical aspects such as state and activity. The results were illustrated in tables and figures with descriptions of every verb. Only was a single pattern reported from among similar patterns. The LV patterns were listed and analyzed in an inventory. Both descriptive and inferential statistics were used to analyze the data. The study adopted a descriptive-analytical method and a corpus-based survey design. Descriptive studies have

both applied and fundamental facets. They may lead to the discovery of scientific facts and attainment of a body of knowledge in an inductive way. In descriptive studies, the researcher makes no intervention in the situation, status, and role of variables. We neither manipulate nor control the variables. In fact, we merely describe what already exists. We carried out library studies and did content analysis. We extracted and analyzed the sentences containing LVs from the Updating Persian Corpus. In order to examine the lexical aspects in “zadan”, “dādan”, and “xordan”, we carried out the study in five phases as follows:

1. Samples of “zadan”, “dādan”, and “xordan” were extracted from the Updating Persian Corpus.
2. The compound patterns of LVs were analyzed in terms of lexical aspect.
3. All verbs were studied in terms of lexical aspect.
4. The data were entered in Excel application.
5. Statistical analysis was carried out in Excel.

4.2 Data collection method and instruments

The research instrument included the Updating Persian Corpus available freely online at <http://www.peikare.ir>. The sample size was calculated using the Krejcie and Morgan’s table (1970). Following the data collection phase, we amassed a large bulk of data to analyze. Thus, we extracted and tabulated the data manually.

4.3 Research population

The research population consisted of the Updating Persian Corpus in total. This is a monitor of Persian news stories updated automatically on a daily basis by crawling the political, economic, social, cultural, scientific, and sports news from news agencies. The non-news texts will be added to the corpus in the future. The corpus covers a wide variety of language genres so that there is an equal proportion of genres in the corpus. The data are updated daily; thus, the corpus is representative, balanced, and up-to-date. In the first phase of corpus development, the news texts have been collected from ISNA news agency since 2017. In the next phases, however, the data will be added to the corpus from other news agencies. The corpus size amounted to 48M words approximately by the end of December 2018. The corpus has an advanced search tool that can be used to search in the database with high accuracy and speed. Moreover, normalization and stemming are automatically done on the data every day, and the words are tagged for the parts of speech.

4.4 Data analysis

The Persian compound verbs constitute an innumerable number of non-verbal and a limited number of verbal elements. In this study, we first extracted all sentences containing the verbs “zadan”, “dādan”, and “xordan”. Then we used the Krejcie and Morgan’s table (1970) to calculate the sample size. Based on Mansouri’s approach (1391), we separated the LVs from heavy, compound prefixed, and incorporated verbs. Eventually, we studied the LVs in terms of their lexical aspects. The results were entered in Excel and analyzed in terms of the number of distinct lexical aspects, patterns, and differences of LVs. The data were managed in Excel and analyzed in SPSS software.

5. Results and recommendations

The main findings of the research are presented in this section. Before reporting the research findings, it is necessary to elaborate on the research hypotheses. The results confirmed all but the second and sixth hypotheses. The second hypothesis posits, “all state verbs are transitive, and their complements are necessarily direct objects.” The findings did not confirm this hypothesis, though. In the LVs made up with “Dādan”, there were 273 state verbs while there were only 72 transitive verbs. Thus, the second hypothesis was rejected. One, however, should note that we addressed linguistic action and language application such that informal constructions were used in the study. Thus, the direct object marker “Ra” was often missing in the samples.

According to the sixth research hypothesis, “activity verbs are used more frequently than state verbs.” The results did not confirm this hypothesis, though. The results of studying a total of 1042 verbs revealed a number 512 state and 512 activity verbs in the sample. That is, activity verbs were not more common than state verbs. Rather, they distributed evenly across the corpus. The results of LV analyses are discussed below.

5.1 Results of LV constructions with “zadan”

The LV “zadan” is semantically bleached to a variable degree in different constructions. Some verbs like “kotak zadan” (beat) and “sili zadan” (slap) are used as almost lexical verbs while others like “labxand zadan” (smile) are semantically bleached to some extent. In some verbs such as “harf zadan” and “telefon zadan”, the verbal element is almost semantically bleached. “zadan” is an LV with high frequency of usage. We extracted about 74000 sentences from the corpus that contained “zadan”. The sample size was calculated to be 498 items using the Krejcie and Morgan’s table (1970). All LV constructions containing “zadan” were analyzed one by one in terms of the lexical aspect. Only one pattern was explained in case of similar patterns. The selected patterns were then analyzed one by one. The verb “zadan” has 1689 entries in Moin Encyclopedic Dictionary. LVs containing “zadan” may denote various meanings including beating, playing an instrument, talking, speaking, mixing with oxygen, clearing,

jumping, biting, and stealing (Homayon Farrokh, 1985:931). There were 498 instances of the verb “zadan” in the research sample including 458 LV constructions (92%) and 40 heavy or incorporated verbs (8%) (see Table 5.1).

Table 5.1 Number of LVs in verb constructions with “zadan”

LV	Heavy/Incorporated
458	40

Figure 5.1 illustrates the distribution of transitive and intransitive verbs. As shown in the figure, there are 331 intransitive (72%) and 127 transitive (28%) verbs.

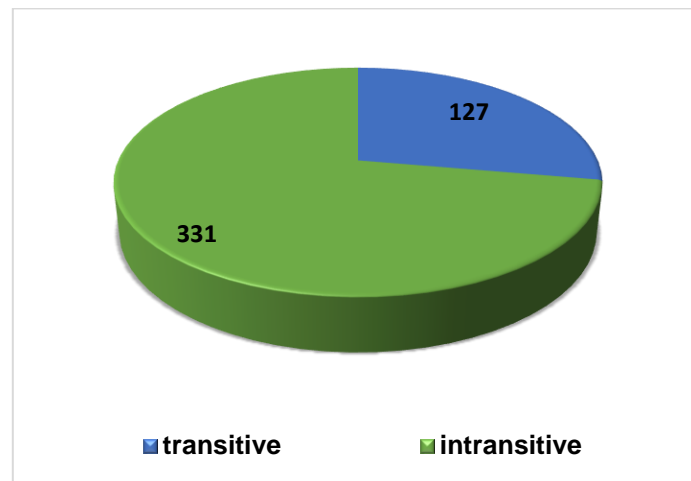


Figure 5.1 Number of LV constructions with “Zadan” by transitivity

5.1.2 “zadan” as state and activity verb

The results of lexical aspects analysis showed that 43% (n=198) of LV constructions were state and 57% (n=260) were activity verbs (see Figure 5.2).

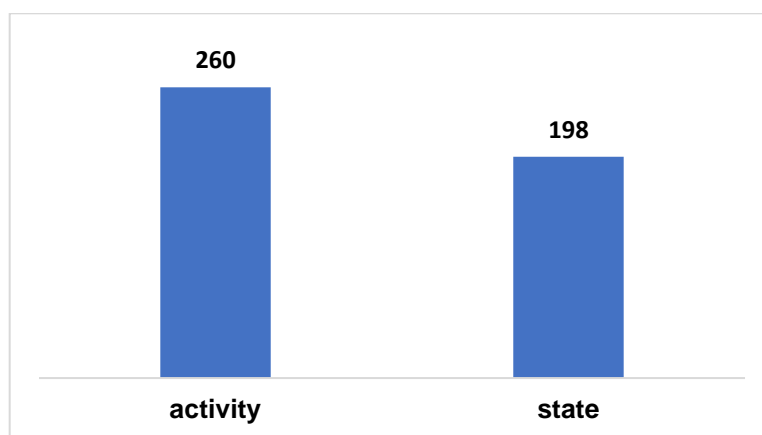


Figure 5.2 Number of LV constructions with “zadan” by state and activity categories

5.1.3 “zadan” as achievement and durative verb

Table 5.2 illustrates the achievement and durative varieties of LVs containing “zadan”. There are a number of 210 achievement verbs including 38 instantaneous and 172 process verbs in LV constructions with “zadan”. There are also 50 durative verbs including 5 unbounded and 45 bounded verbs.

Table 5.2 Number of LV constructions with “zadan” as durative and achievement verbs

Achievement (n=210)	Instantaneous	38
	Process	172
Durative (n=50)	Unbounded	5
	Bounded	45

One should note that instantaneous and process genres are only observed in the activity verbs while state verbs lack such categories.

5.1.4 Simple counterparts

With regard to standalone counterparts of LVs, the results showed that only 9% (n=41) of LVs had simple counterparts while 91% (n=417) had no simple equivalents (see Figure 5.3).

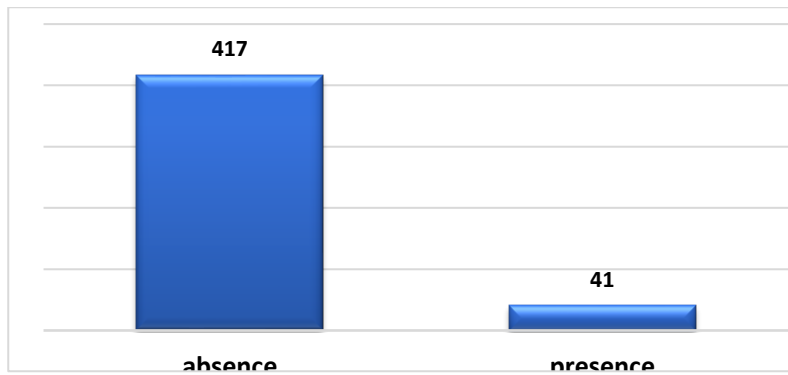


Figure 5.3 LV constructions with “zadan” by absence or presence of simple counterparts

5.1.5 Expandability

LVs are expandable if they can accommodate more constituents between the verbal element and complement. For example, “tafa?ol zadan” (to have divination) may be split to accommodate “be qazaliāte pormohtavāye Häfez” (on the rich sonnets of Häfiz). Therefore, we will have a sentence like “Ali tafa?oli be qazaliāte pormohtavāye Häfez zad” [Ali had a divination on the rich sonnets of Häfiz]. However, the verbal element and complement cannot split to lodge more constituents in the verbs like “zang zadan” (to ring) and “rekāb zadan” (to pedal). As shown in Figure 5.4, 43% (n=199) LV constructions with “zadan” are expandable while 57% (n=259) are non-expandable.

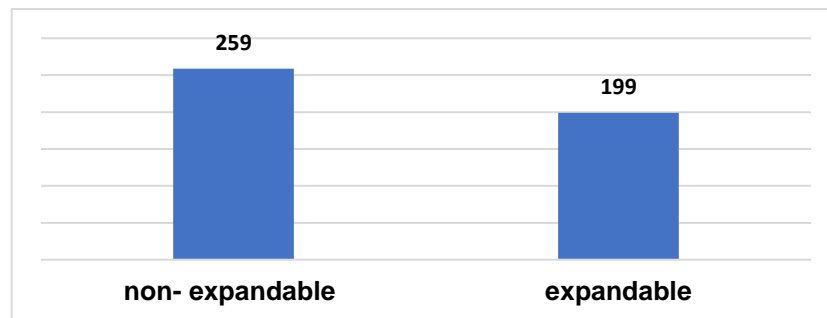


Figure 5.4 Number of LV constructions with “Zadan” in terms of the expandability feature

5.2 Results of LV constructions with “dādan”

There were a number of 5522 sentences containing LV constructions with “dādan” in the corpus. A number of 328 sentences were selected as the sample size based on the Krejcie and Morgan’s table (1970). The verb “dādan” is repeated 1552 times in Moin Encyclopedic Dictionary (1992). Some of the verb constructions with “dādan” are obsolete or scarcely used in modern Persian. LV constructions with “dādan” are either achievement or durative verbs. The compound constructions of “dādan” in the corpus were mostly transitive.

In LV constructions, the verb “dādan” denotes various meanings including “motesāed šodan (evaporate), kabab kardan (grill), vāqe šodan (occur), etc. (Homayon Farrokh, 1985). Of the total 328 verbs, 325 items (99%) are LVs as shown in Table 5.3.

Table 5.3 Number of LV constructions with “Dādan”

Heavy	Light
3	325

5.2.1 “Dādan” as transitive and intransitive verb

LV constructions with “dādan” constituted 253 (78%) intransitive and 72 (22%) transitive verbs (see Figure 5.5).

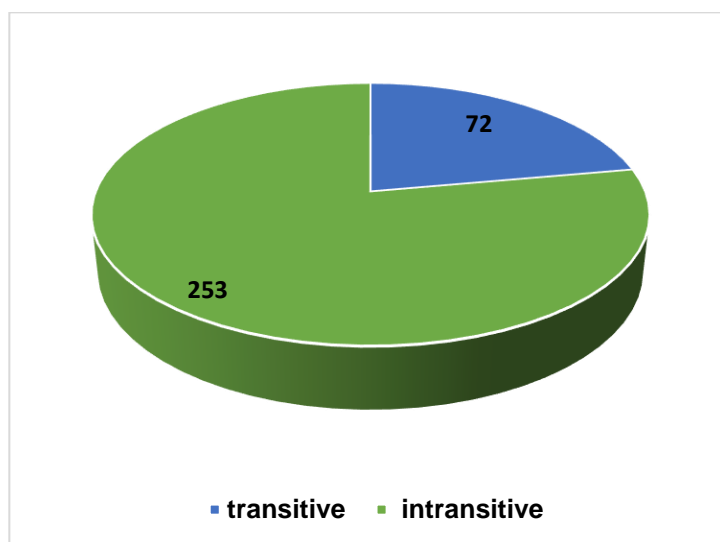


Figure 5.5 Number of LVs with “Dādan” by transitivity

5.2.2 “dādan” as state and activity

As shown in Figure 5.6, a number of 273 (84%) LV constructions are state and 52 (16%) are activity verbs.

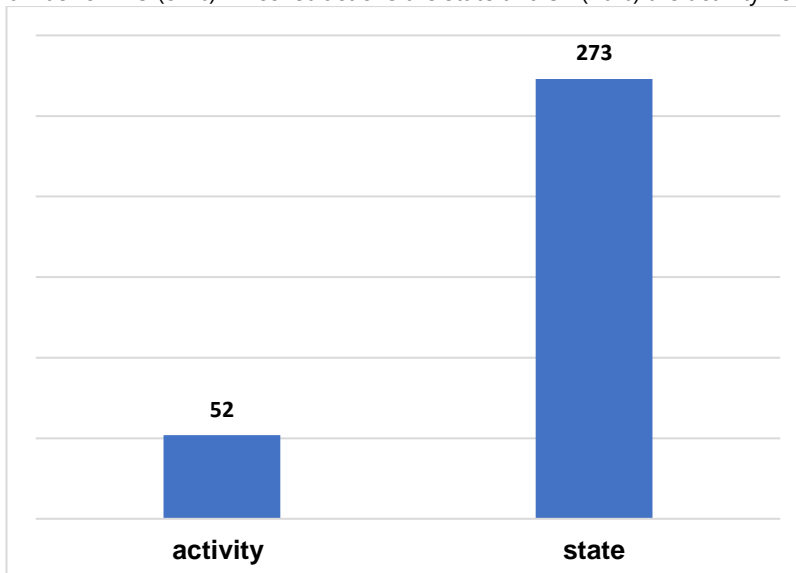


Figure 5.6 Number of LVs with “Dādan” by state and activity categories

The verbs “mazzeh dādan (taste), tarjih dādan (prefer), ahammiyat dādan (care), and dānestan (know)” are state verbs. One of the characteristics of stative verbs is that one cannot ask “what did he/she do?” or “what is he/she doing?” (e.g. “*Ali Darad Javab-e Soal Ra Midanad” [*Ali is knowing the answer to the question]).

5.2.3 Simple counterparts and expandability of “dādan”

As shown in Figure 5.7, a number of 293 (90%) LV constructions with “Dādan” have no simple counterparts while 32 (10%) have simple equivalents.

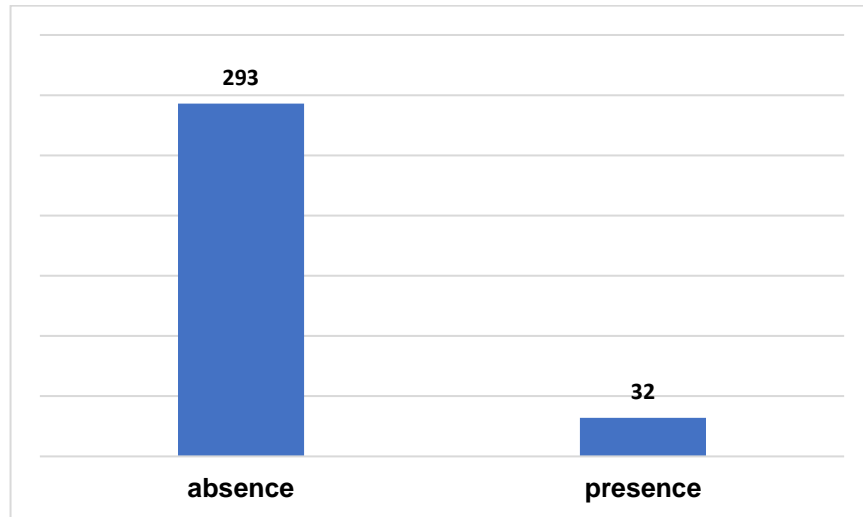


Figure 5.7 LV constructions with “Dādan” by absence or presence of simple counterparts

As illustrated in Figure 5.8, a number of 85 (26%) LV constructions with “dādan” are expandable while 240 (74%) are non-expandable.

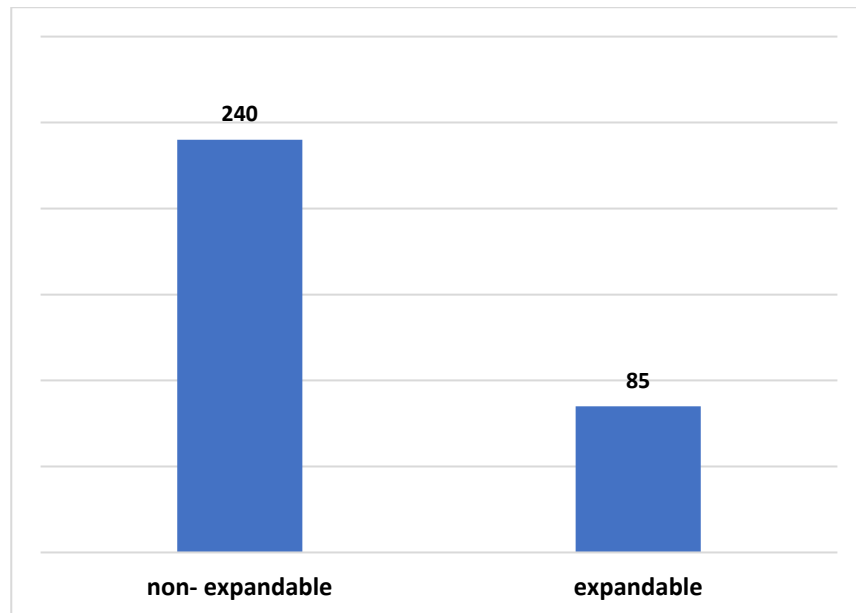


Figure 5.8 LV constructions with “Dādan” by expandability

5.2.4 “dādan” as achievement and durative verb

As shown in Table 5.4, there are a number of 39 achievement verbs including 6 instantaneous and 33 process verbs in LV constructions with “dādan”. There are also 13 durative verbs including 4 unbounded and 9 bounded verbs. One should note that LV constructions with “Zadan” constituted 52 activity verbs.

Table 5.4 Number of LVs with “Dădan” as durative and achievement verbs

Achievement (n=39)	Instantaneous	6
	Process	33
Durative (n=13)	Atelic	4
	Telic	9

5.3 Results of LV constructions with “xordan”

There were about 3995 LV constructions containing “xordan” in the corpus. A number of 243 LVs with “xordan” were randomly selected based on the Krejcie and Morgan’s table (1970). The verb “xordan” has 510 entries in Moin Encyclopedic Dictionary (1992). All compound verbs containing “xordan” are intransitive (Dabir Moghaddam, 1995: 22). These compounds often take an NP and/or AD as the verb complement. “xordan” denotes several different meanings in LV constructions such as “čizi ră az dahän be darun bordan (swallow down something), oftădan (fall), tasădof kardan (have an accident), Băxtan (lose), etc. (Homayon Farrokh, 1985). There were 243 tokens of “xordan” in the sample including 241 (99%) LV constructions.

Table 5.5 Number of LV constructions with “Xordan”

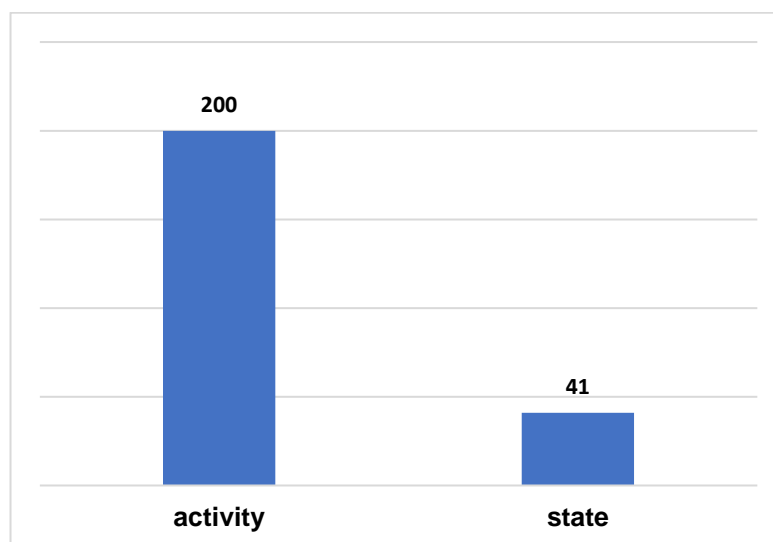
Heavy	Light
2	241

5.3.1 “Xordan” as transitive and intransitive verb

All LV constructions with “Xordan” in the sample are intransitive. Therefore, the results are not illustrated in the figure.

5.3.2 “Xordan” as state and activity verb

As shown in Figure 5.9, 200 (74%) LV constructions with “Xordan” are activity and 41 (26%) are state verbs.

**Figure 5.9 Number of LVs with “Xordan” by state and activity categories**

5.3.3 Simple counterparts

Of the 241 LV constructions with “xordan”, 161 (70%) items have simple counterparts while 80 (30%) items do not have simple equivalents (see Figure 5.10).

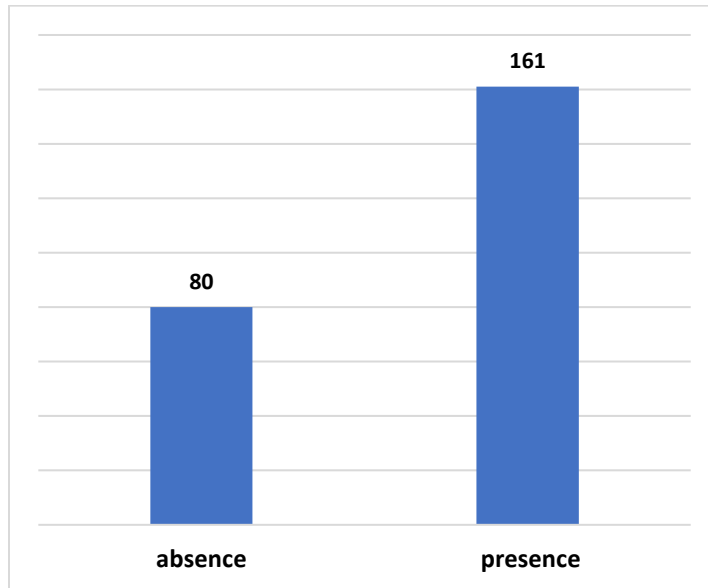


Figure 5.10 LV constructions with “Xordan” by absence or presence of simple counterparts

5.3.4 Expandability

As shown in Figure 5.11, 225 LV constructions with “xordan” are expandable while 16 are non-expandable.

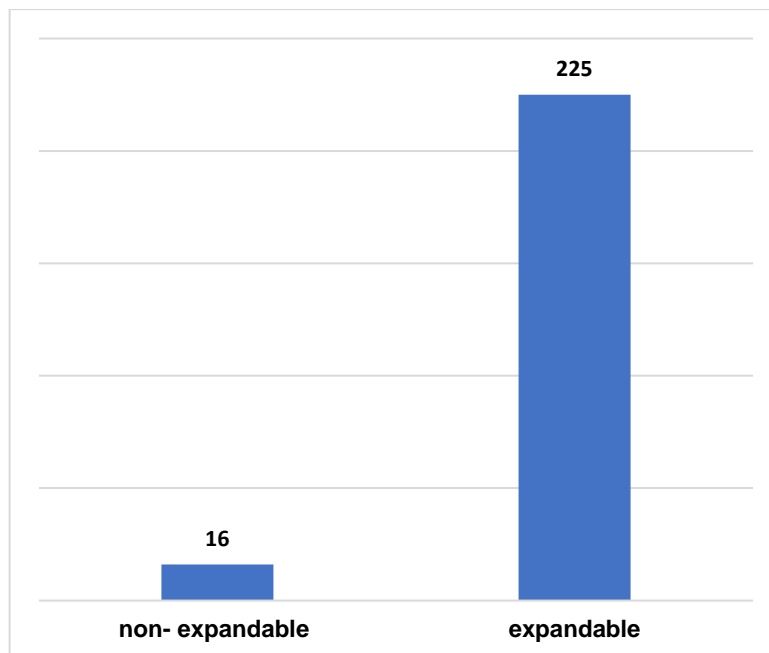


Figure 5.10 LV constructions with “Xordan” by expandability

5.3.5 “xordan” as achievement and durative verb

As illustrated in Table 5.6, LV constructions with “xordan” constitute 150 achievement verbs including 38 instantaneous and 112 process verbs. There are also 50 durative verbs including 5 unbounded and 45 bounded verbs. It should be noted that 200 LV constructions with “xordan” are activity verbs.

Table 5.6 Number of LVs with “Xordan” as durative and achievement verbs

Achievement (n=150)	Instantaneous	38
	Process	112
Durative (n=50)	Unbounded	5
	Bounded	45

5.4 Comparison of the results of analyzing “zadan”, “dādan”, and “xordan” in LV constructions

The results showed that the verb “budan” (be) can never replace LV constructions with “dādan”, “zadan”, and “xordan” (e.g. “Ali xāneh rā ejāreh dād/*Bud” [Ali rent out the house]). As illustrated in Figure 5.12, there were more LV constructions with “zadan” than with other verbs. That is, “zadan” outnumbers “dādan” by 133 items and “xordan” by 217 items.

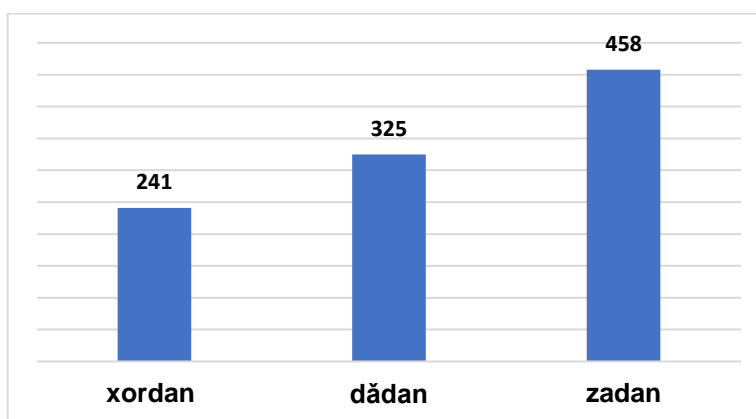


Figure 5.12 Number of LV constructions with “Zadan”, “Dādan”, and “Xordan”

5.4.1 Transitivity

As shown in Figure 5.13, there are a number of 127 transitive LV constructions with “zadan” so that they outnumber the transitive LV constructions with “dādan” by 55 items. Besides, intransitive LV constructions with “zadan” amounted to 331 items that outnumber “Dādan” by 78 and “xordan” by 90 items. Intransitive LV constructions with “dādan” rank second with 253 items. Intransitive LV constructions with “Xordan” are 12 items short of those with “Dādan”. As discussed above, the verb “Xordan” lacks transitive genus in the sample corpus.

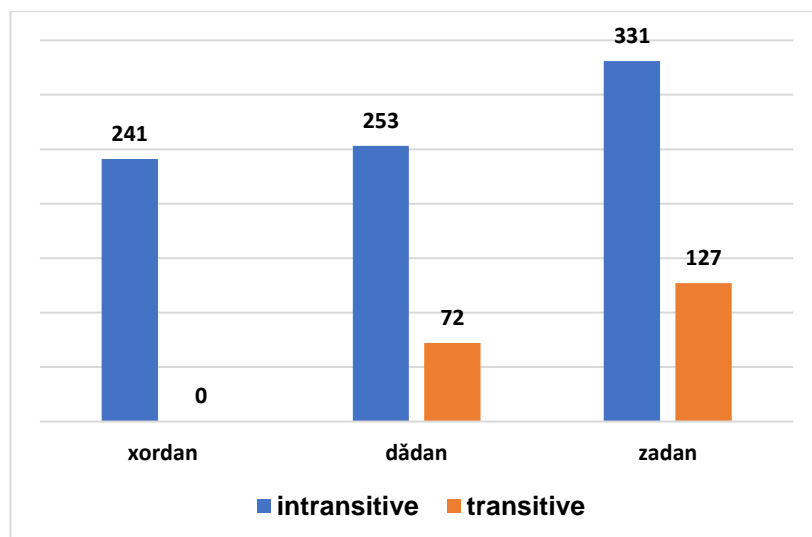


Figure 5.13 Comparison of LV constructions with “Zadan”, “Dādan”, and “Xordan” by transitivity

5.4.2 State versus activity verbs

As shown in the figure below, state LV constructions with “Dādan” outnumber those with other verbs by far. As illustrated in Figure 5.14, of the total 1024 verbs, 512 items are state and 512 are activity verbs. LV constructions with “Zadan” of the activity type by far outnumber those with other verbs of the same type. In other words, they outnumber LV constructions with “Xordan” by 60 and those with “Dādan” by 208 items. Moreover, state LV constructions with “Dādan” outnumber by far those with other verbs of the same type. That is, they outnumber LV constructions with “Xordan” by 232 and “Zadan” by 75 items.

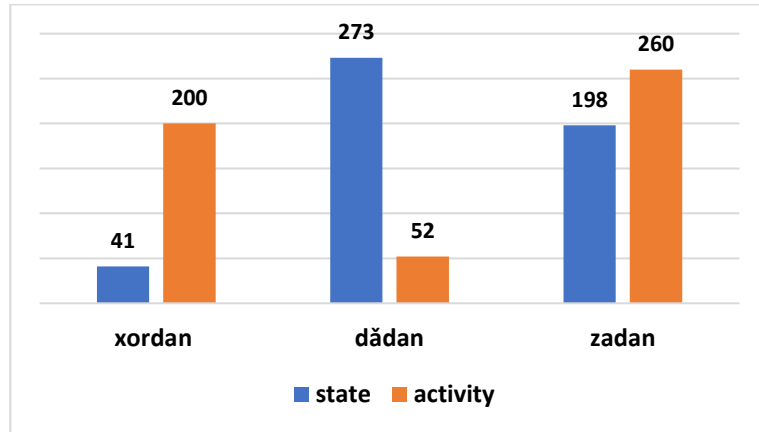


Figure 5.14 Comparison of LV constructions with “zadan”, “dādan” and “xordan” as state and activity verbs

5.4.3 Simple counterparts

As shown in Table 5.7 and Figure 5.15, a number of 415, 293 and 80 LV constructions with “zadan”, “dādan” and “xordan” have no simple counterparts, respectively, which are 788 items in total. However, a number of 161, 32 and 43 LV constructions with “xordan”, “dādan” and “zadan” have simple equivalents, respectively, which make up 236 items altogether.

Table 5.7 Number of simple counterparts of LV constructions with “zadan”, “dādan” and “xordan”

Verbs	Simple counterpart	
	Yes	No
Zadan	43	415
Dādan	32	293
Xordan	161	80

As Shown in Figure 5.15, LV constructions with “dādan” have fewer simple counterparts than those with other verbs. Moreover, LV constructions with “xordan” rank first in terms of the number of simple counterparts.

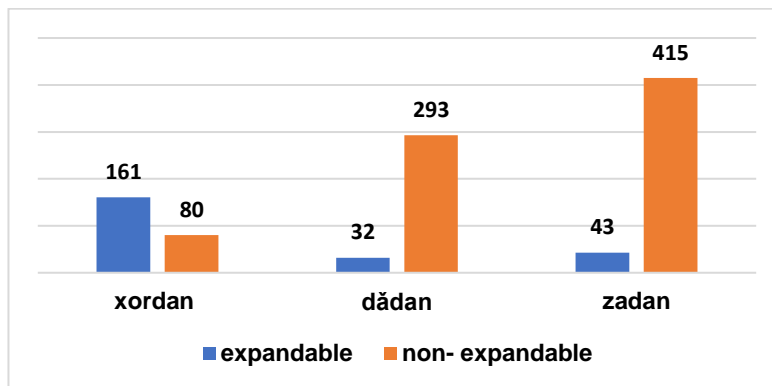


Figure 5.15 Comparison of the number of simple counterparts of LV constructions with “zadan”, “dādan” and “xordan”

5.4.4 Expandability

A number of 418 LV constructions were expandable and 605 were non-expandable in the research sample (see Table 5.8).

Table 5.8 Number of LV constructions with “zadan”, “dădan” and “xordan” in terms of expandability

Verbs	Expandable	
	Yes	No
Zadan	108	350
Dădan	85	240
Xordan	225	16

Figure 5.16 Comparison of the number of LV constructions with “zadan”, “dădan” and “xordan” in terms of expandability

With regard to the absence of simple counterparts, LV constructions with “dădan” and “xordan” have a significant difference with other verbs. As shown in Figure 5.16, LV constructions with “xordan” are more expandable than those with other verbs. Besides, LV constructions with “dădan” are the least expandable items.

6. Conclusion

The three verbs looked into in this study have two functions. They are used as both lexical and light verbs. However, their uses as light verbs are far more frequent compared to their functions as lexical verbs. The three verbs revealed a variety of features in different syntactic constructions. Our study confirmed four of the six hypotheses presented at the beginning of the paper. Among all instances of the three verbs appearing in different verbal constructions, Zadan is most frequent while Xordan is the least. The results of the study show that Zadan has most transitive uses than the other two verbs while Xordan never is used as transitive in compound constructions. Out of 241 instances of Xordan, only 41 express stative situation. However, among 325 instances of Dădan, only 52 indicate activities. Among 458 instances of Zadan, 198 indicate stative situations while 260 of them point to activities. Out of 241 occurrences of non-verbal elements of Xordan, 161 are expandable while 80 of them are non-expandable. As for Dădan, while 193 instances of non-verbal elements of the compound are non-expandable only 32 are expandable. The vast majority of non-verbal elements of constructions carrying Zadan are non-expandable; in fact, while in 415 instances the non-verbal elements are non-expandable only 43 are expandable.

6.1 Recommendations

According to the theoretical domain of the research, the following recommendations may be made for future research:

1. It is recommended that future studies examine larger samples.
2. The present study addressed LV constructions with “zadan”, “dădan” and “xordan”. It is recommended that future studies examine other verbs as well. This will increase the generalizability of the results and allow for comparisons.
3. It is recommended that future studies examine other corpuses as well.

References

- [1] Aarts, B. (1997). *English syntax and Argumentation*. London: Macmillan Press Ltd.
- [2] Ahmadi Givi, H., & Anvari, H. (2003). *Persian Grammar 1*. Tehran: Fatemi Cultural Institute. [In Persian]
- [3] Akmajian, A., Demers, R. A., Farmer, A. K., & Harnish, R. M. (2001). *Linguistics: An Introduction to Language and Communication*. Kh. Gholamali Zadeh (Trans.). Kermanshah: Tagh Bostan Publications. [In Persian]
- [4] Alborzi Varaki, P. (1998). A review of the article "compound verb in Persian language by Dr. Dabir Moghaddam". *The Research Journal of the College of Foreign Languages of Tehran University*, 5. [In Persian]
- [5] Amoo Zadeh, M., & Bahrami, F. (2012). Light verb constructions based on cognitive linguistics. *Language Research and Comparative Literature Quarterly*, 3(4), 169-191. [In Persian]
- [6] Anvari, H., & Ahmadi Givi, H. (2006). *Persian Grammar 2*. Tehran: Fatemi Cultural Institute. [In Persian]
- [7] Arkan, F. (2006). The process of noun incorporation: a syntactic or morphological approach (based on a sample Persian language data). *Journal of Language and Linguistics*, 2(4), 95-110. [In Persian]
- [8] Brugman, C. (2001). Light verbs & polysemy. *Language Sciences*, 22, 55-578.
- [9] Cook, W. (1979). *Case Grammar: Development of the Matrix Model (1970 – 1978)*. Washington: Georgetown University Press.
- [10] Dabir Moghaddam, M. (2010). *The theoretical linguistics of the emergence and development of generative linguistics*. Tehran: SAMT. [In Persian]
- [11] Falk, J.S. (1993). *Language and linguistics: a survey of basic concepts and applications*. Kh. Gholamali Zadeh (Trans). Mashhad: Astan Ghods Publications. [In Persian]
- [12] Farshid Vard, Kh. (2013). *Today's comprehensive grammar based on new linguistics*. Tehran: Sokhan Publications. [In Persian]
- [13] Fillmore, CH. (1968). The Case for Case. In E. Bach and R. Harms (EDS), *Universals in Linguistic Theory*. New York: Holt, Rinehart and Winston.
- [14] Fromkin, V., and et al. (1990). *An Introduction to Language*. London: Holt, Rinehart and Winston.
- [15] Grice, H.P. (1975). Logic and Conversation. In Cole, P. & Morgan, J., *Syntax and Semantics*, Vol. 3. New York: Academic Press.
- [16] Huddleston, R.D. & P.K. Pullum. (2002). *The Cambridge Grammar of English Language*. Cambridge: Cambridge Press University.
- [17] Huddleston, R.D. (1988). *English Grammar: An Outline*. Cambridge: Cambridge University Press.
- [18] Jackendoff, R. (1972). *Semantic Interpretation In Generative Grammar*. Cambridge. Mass: MIT Press.
- [19] Jespersen, O. (1940). *A Modern English Grammar on Historical Principles*. London: Allen & Unwin.
- [20] Karimi Doostan, Gh., & Roohi Bayegi, Z. (2016). Investigating the polysemy of light verb constructions with "Zadan" based on cognitive approach. *Jostarhay-e Zabani Bimonthly*, 7(3), 129-148. [In Persian]
- [21] Karimi, S. (2005). *A Minimalist Approach to Scrambling Evidence from Persian*. Berlin and New York: Mouton De Gruyter.
- [22] Karimi-Doostan, GH. (1997). Light verb constructions in Persian. Unpublished PhD Dissertation, University of Essex.
- [23] Karimi-Doostan, GH. (2003). Argument Structures of Light Verbs in Argument Structure. *Conference Dehli*.
- [24] Katamba, F., & Stonham, J. (2012). *Morphology*. J. Rahimian (Trans). Shiraz: Shiraz University Press. [In Persian]
- [25] Khanbaz, Sh. (2013). Investigating the polysemy of zadan and keshidan light verbs in Persian compound constructions based on the Brugman's cognitive framework. Unpublished MA thesis, Shiraz University, Shiraz, Iran. [In Persian]
- [26] Khanlari, P.N. (1987). *Persian grammar*. Tehran: Toos Press. [In Persian]
- [27] Krejcie, R., & Morgan, D. W. (1970). <https://WWW.Spssiran.Com/> Morgan – Table Krejcie.
- [28] Krejcie and Morgan's table (1970). Calculating the sample size. Retrieved from <https://www.spss-iran.com/morgan-table>.
- [29] Lazard, G. (2005). *Persian grammar*. M. Bahraini (Trans.). Tehran: Hermes Publication. [In Persian]
- [30] Mansouri, M. (2005). Causative construction in Persian based on the verb shell scheme. *Journal of Language and Linguistics*, 1, 91-113. [In Persian]
- [31] Mansouri, M. (2013). Light verbs in Persian compound verbs. *Studies of Western Iran Language and Dialects Quarterly*, 1(1), 77-104. [In Persian]
- [32] Meshkatodini, M. (2011). *Persian grammar: words and structural links*. Tehran: SAMT Publications. [In Persian]
- [33] Mirzaie, A., & Molodi, A.S. (2014). The first corpus of sematic role in Persian language. *Language Science*, 2(3). [In Persian]
- [34] Modaressi, F. (2008). *From morpheme to sentence: grammar-linguistic thesaurus*. Tehran: Chapar Press. [In Persian]
- [35] Mohammad, J., & Karimi, S. (1992). Light Verbs Are Taking Over: Complex Verbs in Persian. *Proceedings of the Western Conference on Linguistics*.
- [36] Molodi, A.S. (2018). Updating Persian Corpus (Shiraz University). Retrieved from <http://www.peikare.ir>
- [37] Rahimian, J. & Razmjoo, S.A. (2010). *Principles of linguistics 1*. Shiraz: Shiraz University Press. [In Persian]
- [38] Rahimian, J. (2002). *Persian Grammar: form, role and meaning*. Shiraz: Shiraz University Press. [In Persian]
- [39] Sasaki, F. (2011). Are incorporation and compounding justifiable in Persian verbs? *Proceedings of the Third Conference on Morphology, Iranian Linguistics Society, Tehran, Iran*, 1-41. [In Persian]
- [40] Shariat, M.J. (2005). *Persian grammar*. Tehran: Asatir Publications. [In Persian]
- [41] Soltani, R., Amoo Zadeh, M., & Rezaie, H. (2017). Dynamicity and polysemy in light verb constructions with "Gereftan". *Language Research*, 8(2), 59-78. [In Persian]
- [42] Tabatabaie, A. (2005). Compound verbs in Persian language. *Farhangestan Letters*, 26, 16-34. [In Persian]
- [43] Tabibzadeh, O. (2006). *Verb capacity and basic sentence constructions in contemporary Persian: a study based on dependency grammar*. Tehran: Markaz Press. [In Persian]
- [44] Vahidian Kamyar, T., & Omrani, Gh. (2000). *Persian grammar 1*. Tehran: SAMT Publications. [In Persian]
- [45] Yule, G. (1996). *Pragmatics*. Oxford: Oxford University Press.