



# Conceptual Metaphors of Pain in Persian: A Cognitive Analysis

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## ABSTRACT

**Aim:** Pain is an abstract concept that can be understood by others through conceptual metaphors. The purpose of this study was cognitive analysis of pain metaphors in Iranian patients.

**Method and Materials:** This qualitative study has been done among 30 patients with musculoskeletal pain through cognitive analysis. The participants were asked to compare their pain to anything that comes to their minds. In next stage, frequent categories of pain source domains were extracted from 300 statements manually.

**Findings:** The results of this study showed that there were 9 important pain source domains as object, causation, path and direction, human, place, taste, container, force and circle.

**Conclusion:** To conclude, it seems that pain as like abstract concepts can be understood as object, causation, path and direction, human, place, taste, container, force and circle among Persian patients.

**Keywords:** Conceptual Metaphors, Pain, Cognitive Analysis, Iranian Patients.

## Introduction

Pain is an inner and unique experience. Pain is produced as a result of internal or external damage to tissues and is vital to survival. Pain is a subjective experience that it is difficult to express clearly in language [1]. Especially, sometimes pain is not visible sign of physical damage which some scanners like X-rays and CAT scans cannot trace and detect the causes of damage. Therefore, individuals suffer from pain report their problems via language, in another word with conceptual or cognitive metaphors [2]. In this respect, cognitive or conceptual metaphor means naming of something or the description of something in such a way that the name or description belongs to something else conventionally [3].

In the cognitive - linguistic sciences, which is one of the new fields in linguistics, language is not separated from cognitive processes but is part

of the human thought system [4]. In other words, language is a cognitive ability that is also influenced by culture. Thus, metaphor is also a tool that relates to both language and the human cognitive system [5]. In fact, metaphor helps us to understand abstract concepts that have no external value, such as time, philosophical concepts, spiritual matters, God, pain and so on [6]. In other words, metaphor helps us to conceptualize non-objective things, it is present in our entire cognitive system, and without cognitive metaphors it is practically impossible to think and understand abstract things [7]. The study of language from this perspective, is the study of conceptual or cognitive patterns. Conceptual metaphor theory is strongly influenced by cognitive psychology and cognitive anthropology [8].

Metaphor is a kind of regular conceptual mapping or connection between two conceptual-cognitive domains [9]. In conceptual metaphor,

there is an empirical or tangible domain based on human physical characteristics called the source domain that has bodily characteristics, and this domain is conceptually mapped or related to another domain that is intangible or abstract and is called the target domain [10]. This view illustrates the embodiment role in understanding meaning, cognition or abstract concepts. Because our sensory-motor system is involved in the formation of his conceptual and cognitive system. In other words, the human body or its sensory-motor system is rooted in the representation of knowledge (cognitions) in the brain [11]. The body and the world around us are involved in our perceptions and cognitive processes, and without the body and its features, cognitive processing is almost impossible [12]. In Iran in Kurdish dialect of Ilam, a study on 150 sentences, showed that the most frequent pain source domain in metaphorical conceptualization was damaging and the lowest frequency source domain in metaphorical conceptualization was light and color [13]. In English language, pain is conceptualized as an object, place, causation, and direction [14]. A study of metaphorical pain language among fibromyalgia patients, results show pain experiences through using words indicating a model of pain that presented pain as an aggressive physical deformation and a torture-like experience [15]. In another study, it has shown that seven overarching metaphor source domains were found as Causes of Physical Damage, Common Pain Experiences, Electricity, Insects, Rigidity, Bodily Misperception, and Death and Mortality [16]. However, according to literature review, few tools are available to evaluate metaphors in various conceptual domains. Recently, new approaches are current to provide accurate tools for examining conceptual areas in the form of questionnaires and scales [17]. The importance of identifying pain metaphors in Persian language and its

application in medicine is obvious, because the identification of pain metaphors can facilitate the patient-physician relationship and find common ground. On the other hand, many physicians use different metaphors to identify diseases more accurately, especially for musculoskeletal pain. Therefore, the study of metaphors in the field of medicine has recently begun, such as an existed study of cancer that researchers found "cancer as a metaphor" [18], which aimed to promote the fields of medicine and knowledge of the cognitive basis of diseases and its treatments or therapy. Therefore, in Persian language, the study of metaphors in the field of medicine is a new knowledge and there is a lack of many studies in this field. Accordingly, the purpose of this study is to investigate the metaphors of pain in Persian language.

### Method and Materials

This research is a qualitative study which has been done through cognitive analysis. For this purpose, 50 patients with musculoskeletal pain were asked to compare the severity of their pain to anything that comes to their minds. Inclusion criteria included having musculoskeletal pain for 5 years and being monolingual with just Farsi language. Exclusion criteria included speaking with local languages in addition to Farsi language.

The sample was selected by purposive sampling method. Their conversation was recorded. In next stage, researcher extracted pain keywords from Fararoy spectral dictionary [19] Which were: "tiz, bitab konandeh, rish, nasoor, jankah, aman boridan, kalafeh, dardesar, tir keshidan, azarandeh, tasdiie, atash gereftan, zanandeh, vool khordan, zahmat, jangodaz, ostekhan laiee zakhm, ranj avar, tahrik konandeh, deltang konandeh, taghviat konandeh, kesel konandeh, chaghoo zadan, ghat kardan."

Sentences containing pain keywords were extracted manually, which resulted in a total of 800 pain metaphorical sentences. Finally, 300 sentences were extracted purposively in which pain was conceptualized metaphorically. The following methods were used to extract the conceptual metaphor of pain: Finding a word related to the concept of pain, manual search of written text, searching source domains words and searching target domains words.

In this study demographic questionnaire that included variables such as gender, age, intensity of pain, type of pain was used to collect data.

Data were analyzed by using categorizing and descriptive analyzing such as frequency.

**Findings**

In this study 50 patients with musculoskeletal pain including 17 men and 33 women with mean age of 47.14 (SD=2.74) years old took part in the study. The demographic variables of participants are shown in Table 1.

According to the cognitive analysis of 300 conceptualization of pain metaphor by patients with Farsi language, the conceptual metaphors of pain was mapped as follows: pain is object, pain is causation, pain is path, pain is human, pain is place, pain is taste,

**Table 1)** Summary of statistical indicators related to demographic variables of the studied participants (N = 50)

Variables	Components	N(%)
Gender	Man	17 (34)
	Women	33(66)
Pain severity	Severe	28 (56)
	Moderate	14(28)
	Mild	8(16)
Type of pain	Muscular pain	29(58)
	Skeletal pain	21(42)
	Total score	50 (100)

pain is container, pain is force and pain is circle. After extracting 300 metaphorical statements of source domains, as has been shown, metaphorical statements of pain with the object source domain had more than many other domains. Moreover, the study of the pain source domains showed that pain is causation, pain is human, pain is path and direction, pain is place, pain is taste, pain is container, pain is force and pain is circle frequencies, respectively (Table 2). Here is an example for each source domain: Pain is object as it seems to stab me in the bone [ostokhanam ra khanjar mizanand] . In this sentence pain conceptualized sharp things. Pain is causation as my fingers are frozen [anghoshtam yakh zade]. In this sentence, pain is conceptualized in such a way that the cause of freezing fingers. Pain is human as deadly pain, killer pain and it destroyed me [darde koshandeh va oon mano nabood mikone]. In these statements, pain is conceptualized as human who kill or destroy others. Pain is path and direction as heavy head and my head is getting up [saram sangineh or saram dare boland mishe]. In these statements, pain is conceptualized in a way that is rising in the upward direction. Pain is place as my eyes popped out, [cheshmam biron zad], in this phrase, pain is conceptualized in such a way that the patient was in so much pain that his eyes bulged. Pain is taste as good water does not go down the throat or bitter pain [abe khosh az ghaloo paeen naraftan, khone jegar khordan and or darde talkh]. In this statements pain is conceptualized in a way that it has taste and it is edible. Pain is container broken bowl [kasee shekasteh]. In this statement, pain is conceptualized in such a way as a container is broken by pain. Pain is force as it relents me, it attacks me, it has made me restless and debris fell on my head [bi amanam karde, be man hamle kard and havar saram shod.]. In these phrases,

**Table 2)** Pain source domains and its frequencies

Source domain	N (%)
Object	82 (27.3)
Causation	63 (21.0)
Human	55 (18.3)
Path and direction	31 (10.3)
Place	28 (9.3)
Taste	18 (6.0)
Container	12 (4.0)
Force	8 (2.7)
Circle	3 (1.0)
Total	300 (100)

pain is conceptualized in a way that has power and force. Pain is circle as my tommy cramps [chekamam pich mizaneh]. In this phrase, pain is conceptualized as if it rotates in a circle.

### Discussion

The purpose of this study was to investigate cognitive analysis of pain metaphors among chronic patients who suffer from musculoskeletal pain. Results showed there are nine source domains that express pain in Farsi language patients with musculoskeletal pain as pain is object, pain is causation, pain is human, pain is path and direction, pain is place, pain is taste, pain is container, pain is force and pain is circle, respectively. The conceptualization of pain as an object is more frequent than other source domains. Pain seems to be more objectified as an object, then causation, human, path and direction, place. The results obtained from this study are somewhat consistent with the results of karimi [13] and Semino [14].

As cited before, metaphor is not only introduced into language to express emotions, sensations and mental states but also plays an important role in understanding more aspects of conceptualizing emotion and

emotional experiences [20]. Pain is also one of the abstract and emotional concepts that there is no choice but to use more tangible and objective concepts to express it [21].

The use of pain metaphors facilitates embodied expression of pain that cause empathic senses between speaker and listener or reader. Indeed, pain shares some of the characteristics of target domains and it has same source domains (like object, path and direction, human, taste, container, force and circle) with abstract concepts as time [22]. Since the understanding of metaphors based on Lakoff's theory is universal [23], it can be said that metaphors are understandable from childhood, and the more abstract the level of thinking, the richer the understanding and expression of metaphor [24]. On the other hand, according to the rate of abstract development of patients and the type of pain metaphors they express, they can help physicians diagnose and treat the illness. In other words, many diseases such as cancer [25] and related medical disciplines such as oncology [26] and many treatments and therapies (such as cancer treatment metaphors [27] use more metaphors to identify and diagnose the disease and if the patient has a high level of cognitive development, the treatment process is better and more desirable. The metaphorical representation of pain suggests a special way of thinking about pain that reflects a kind of worldview combined with the objectification of abstract matters. The root of such thinking is in the culture and social context of the Farsi language speakers. In another words, this kind of conceptualization of pain reflects intracultural characteristics that affect the cognitive processing of patients with musculoskeletal pain and has led to the creation of a material and objective model for understanding and expressing pain.

Although this study has own strong points that could help physician, it is not without

limitations. In this regard, it can be pointed out that the study is limited to a few patients suffering from musculoskeletal pain. Moreover, the sample was limited to monolingual speakers due to the abstract nature of pain perception. Therefore, researchers suggest to do this study in a larger sample with different patients and non-qualitative studies.

### Conclusion

To conclude, it seems that Farsi language patient with muscular skeletal pains report and explain their pain as their own perception and words. Pain is as object was the most frequent mapping in studied. The findings of the present study accept the view that cultural context can have a strong effect on the conceptualization of abstract matters, including pain.

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**Author contribution:** FR was corresponding author and methodologist of the study (%100).

**Confident of Interest :** The author declares that there is no interest of confident for this study.

**Ethical permission:** In this study all ethical principles were respected. The target and procedures of the study was explained for the participants and the consent form was signed by all participants.

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