



Cognitive Analysis of Quality of Life Metaphors from the Perspective of Health Promotion Students

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ABSTRACT

Aims The purpose of this study was the cognitive analysis of quality of life conceptual metaphors from the perspective of health promotion students of Tehran University.

Participant & Methods This qualitative study was conducted on 35 health promotion students of Tehran Medical University through cognitive analysis in 2021. They were selected by the purposive sampling method. Participants were asked to compare the dimensions of quality of life (WHO-36) to what they perceived. Their conversation was recorded and collected by WhatsApp voice recording. The population of 946 metaphorical phrases was obtained. According to the theoretical saturation rule, 300 phrases were selected purposively. Phrases and sentences in which the quality of life was metaphorically expressed were manually separated and categorized.

Findings The results showed that there were 8 salient source domains for quality of life. They respectively included object, place or location, path, direction, product, strength and power, human, and money. There were different metaphorical mappings for each source domain. Moving and edible objects were the most mapping for "quality of life is the object".

Conclusion It seems that quality of life can be understood and conceptualized as material things according to the embodiment rule. This fact has cultural roots as well. Paying attention to the leads to quality of life promotion.

Keywords Metaphor; Quality of Life; Cognitive Science; Health Promotion

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Introduction

Quality of life is a broad and pervasive term for which there is no unified definition [1]. The most accepted definition of quality of life is that provided by the World Health Organization [2]. According to WHO, quality of life has important factors such as psychological, physical, and environmental dimensions and people's perceptions related to these factors [3]. In another word, some indicators that define the quality of life included economic and social status, political system, healthcare, cultural factors, leisure activities, peripheral environments, family atmosphere, and all psychological factors [4-6]. Although the term "quality of life" is an interdisciplinary term, it is in itself a metaphorical term. Conceptual metaphors, according to Lakoff's theory, are containers of thought that are first in the mind or cognitive system and then in language, and their rules are based on physical properties that are called embodiment [7]. In cognitive linguistics as a new field in cognitive sciences, language has cognitive components and cognitive or conceptual metaphors have key roles in our minds [8]. In fact, the important role of metaphors is to help understand abstract concepts such as time, pain, and so on [9,10]. Every conceptual metaphor has two basic components; A source domain that has empirical and objective characteristics and a target domain that has subjective or abstract features [11]. In this view, abstract thinking has empirical or bodily components [12]. In another word, we mapped target domains into source domains, and cognitive thinking is shaped by this process as conceptual metaphors [13]. Metaphorical mappings are based on socio-cultural backgrounds, however, according to Lakoff's theory, the foundation of conceptual metaphors is universal, because our cognitive system is the same as human beings [14] and it is rooted in our neural system [15].

In general, in every language "life" can be conceptualized as a journey, vehicle, string, living being, object, play, and game [16], but there are some differences that go back to the socio-cultural backgrounds. For example, a study concluded the metaphor of life for the Chinese is fast and highly transformative, and for the British, it is slowly and salient being conceptualized [17]. Conceptual metaphors related to life show the intellectual coherence and harmony of the abstract elements of life [18]. Metaphors of quality are applied in different domains such as education, management, and health [19-21]. Quality can be conceptualized as affairs, materials, humans, moving objects, strength and power, product, result, high direction, and weight [22, 23]. In one study, Blumenberg found that quality of life can conceptualize as money and valuable objects [24].

Based on Lakoff's theory, the more abstract a concept is, the more metaphoric it must be.

Metaphors, on the other hand, follow our empirical or bodily characteristics. Therefore, they have a special place or location in our cognitive capacity and the basis of their processing is in the brain and we cannot think without metaphors. Quality of life, like many health concepts, is essentially a metaphorical concept. Accordingly, this study aimed to seek cognitive analysis of conceptual metaphors of quality of life as a psychological and health variable that cannot be studied directly but is expressed and understood by metaphors; Without them, we cannot think or describe the quality of life and its dimensions.

Participant & Methods

This qualitative study was conducted on 35 health promotion students of Tehran Medical University through cognitive analysis in 2021. This study has two stages. The statistical population in the first stage included all health promotion students of Tehran University of Medical Sciences. In the second stage, the statistical population included all metaphorical phrases or sentences expressed by students, which were 946 phrases. In this stage, metaphorical phrases and sentences were considered as meaning units. In the first stage 35 health promotion students of Tehran Medical University were selected by purposive sampling method and 300 phrases or sentences were analyzed purposively. In both stages of the study, the sample size was selected based on the theoretical saturation rule [25]. In the first stage, the inclusion criteria were familiarity with the concept and dimensions of quality of life, undergraduate and graduate students, and ages between 20 and 32 years. In the first stage, 40 students were considered, but 15 participants were excluded due to lack of interest or cooperation. The students uttered 1836 phrases and sentences, 946 of which were metaphorical. In the second stage, the inclusion criteria were short phrases or sentences that explain metaphorically and their source domains can be understood easily and clearly.

A demographic questionnaire that includes gender, age, grade, and marital status had considered for the sample of the first stage of the study. Due to the Corona pandemic, health promotion students were invited to participate in a specialized scientific interview on the Instagram platform. Then a telephone interview was conducted with them and the objectives of the research were stated to them. Finally, they were asked to answer questions via WhatsApp voice recording. Participants were asked to compare and articulate metaphorically the dimensions of quality of life based on the World Health Organization's Quality of Life dimensions 2012, psychological health (energy and fatigue, pain and discomfort and sleep and rest), physical health (bodily image and appearance, negative feelings,

positive feelings, self-esteem, thinking, learning, memory and concentration), level of independence (mobility, activities of daily living, dependence on medicinal substances, medical aids and work capacity), social relationships (personal relationships, social support and sexual activity), environment (financial resources, freedom, physical safety and security, health and social care: accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation/ leisure, physical environment: pollution/noise/ traffic/climate, transport) and Spirituality/Religion/Personal beliefs [26], to what they perceived. Their conversation was collected. Phrases and sentences in which the quality of life was metaphorically expressed were manually separated and categorized. Their frequency and percentage were also calculated. All types of mappings were extracted. Participants and their statements were recorded in the serial number.

Findings

The mean age of students was 26.73±1.06. Most of the participants were female undergraduates, and single (Table 1).

Table 1) Summary of statistical indicators related to demographic variables of the studied participants (N =35)

Variables	Components	N (%)
Gender	Men	11 (31.43)
	Women	24 (68.57)
Marital status	Married	6 (17.14)
	Single	28 (80.00)
	Divorced	1 (2.86)
Grade	Undergraduate	26 (74.29)
	Postgraduate	9 (25.71)

Based on cognitive analysis of 300 metaphorical phrases and sentences, metaphorical source domains conceptualization of quality of life in health promotion students were quality of life is an object, place or location, path, direction, product, strength and power, human, and money (Table 2).

Table 2) Quality of life source domains and its frequencies

Source Domains	N (%)
Object	127 (42.33)
Place or Location	41 (13.67)
Path	33 (11.00)
Direction	29 (9.67)
Product	24 (8.00)
Strength and Power	21 (7.00)
Human	18 (6.00)
Money	7 (2.33)

Extracting 300 metaphorical phrases and sentences of source domains, have been shown the quality of life as object source domain had more frequency than many other source domains, and quality of life as money had less frequency than other source domains in students (Diagram 1).

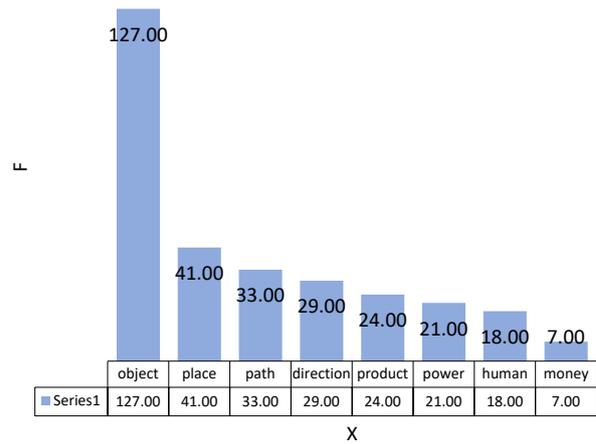


Diagram 1) The frequency of source domains of quality of life

Based on the metaphorical analysis of the participants, important mappings were obtained for each source domain (Table 3).

Table 3) The main source domains mapping of quality of life

Quality of life is an object	Quality of life is moving object
	Quality of life is an edible object
Quality of life is place or location	Quality of life is a container
Quality of life is location	Quality of life is depth
Quality of life is the path	Quality of life is trip
Quality of life is a direction	Quality of life is moving upward
	Quality of life is growing
Quality of life is a product	Quality of life is an outcome
	Quality of life is an instrument
Quality of life is Strength and Power	Quality of life is motivation
	Quality of life is life-giving
	Quality of life is effective
	Quality of life is determinant
Quality of life is human	Quality of life is a survivor
	Quality of life is a protector
Quality of life is money	Quality of life is valuable
	Quality of life is an investment

There were many examples of the quality of life source domains and here were some examples for each of them according to the order of the participants who explain the quality of life dimensions or their mapping, including:

Quality of life is the object

Example 1: "I am working on my quality of life" [P3]. Meaning of metaphor: the quality of life is conceptualized as an object that must be worked on like an object.

Example 2: "Health is the water of life" [P 19].

The meaning of metaphor in this sentence was health is conceptualized as an edible object.

Quality of life is place or location

Example 1: "My life environment is in poor condition" [P 21].

The meaning of metaphor in this sentence was the living environment is conceptualized as one of the

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dimensions of quality of life in a bad situation and place.

Example 2: "My work capacity has increased" [P 7].
The meaning of metaphor in this sentence was the level of individual independence is expressed as a spatial and spatial metaphor.

Quality of life is a path

Example 1: "My life way is on the right railroad track" [P12].

The meaning of metaphor in this sentence was the quality of life is conceptualized as the path of life in the form of falling on the railway tracks.

Example 2: "You have to work for health way" [P 2 & 32].

The meaning of metaphor in this sentence was reaching the destination, which is health, goes a long way.

Quality of life is a direction

Example 1: "My lifestyle is improving" [P 25].

The meaning of metaphor in this sentence was the quality of life is conceptualized in a high direction.

Example 2: "My faith in God rises when I am in pain" [P 4 and 14].

The meaning of metaphor in this sentence was the rise of faith has metaphorically conceptualized direction.

Quality of life is a product

Example 1: "My physical health is due to maintaining my quality of life." [P 9].

The meaning of metaphor in this sentence was physical health is conceptualized as a product of the quality of life.

Example 2: "I always support my family members and they support me." [P3 & 26]

Meaning of metaphor: Here, support from social support is conceptualized.

Quality of life is strength and power

Example 1: "My mental problems keep me from doing my daily work." [P 24 & 31].

The meaning of metaphor in this sentence was mental problems were conceptualized as one of the dimensions of lack of quality of life as a strong obstacle to daily life.

Example 2: "I run out of energy soon after everything." [P 21 & 26].

The meaning of metaphor in this sentence was energy loss is conceptualized as a lost force that threatens physical health

Quality of life is human

Example 1: "Sometimes my physical health plays a bad role." [P 11].

The meaning of metaphor in this sentence was physical health is conceptualized as one of the important dimensions of quality of life as a person who plays a role.

Example 2: "A new lifestyle has given me a new life." [P 10 and 14]

The meaning of metaphor in this sentence was lifestyle is conceptualized as a life-giving person.

Quality of life is money

Example 1: "I cannot put a price on my lifestyle." [P 17, 18, 22, and 35].

The meaning of metaphor in this sentence was the quality of life without price is conceptualized.

Example 2: "Health cannot be bought with any wealth." [P 4, 15, 16, 19, 21 and 34].

The meaning of metaphor in this sentence was mental and physical health is conceptualized as wealth that cannot be bought with any wealth.

Discussion

The purpose of this study was to investigate the quality of life metaphors in Tehran Medical University health promotion students. Results showed eight salient source domains define the quality of life among health promotion students at Tehran Medical University. In this study, source domains that are mapping the quality of life are: quality of life is the object, quality of life is place or location, quality of life is a path, quality of life is direction, quality of life is a product, quality of life is strength and power, quality of life is human, and quality of life is money, respectively. Conceptualization of quality of life as objects are more frequent than in other source domains and quality of life is money is less than the rest. The results of this study are consistent with Huang^[17], Baldwin *et al.*^[18], Lilja *et al.*^[19], and Zayed's^[22] studies.

The use of conceptual or cognitive metaphors helps us to facilitate embodied expression of the quality of life components. They have abstract elements like pain^[10] and time metaphors that can be measured in different ways, such as scale construction^[27] or other ways like designing protocols and they become more complex with cognitive development^[28]. Indeed, conceptual metaphor theory helps us how and when we can find meaning in life and its quality. Quality of life's meaning and its implications can be difficult to understand or grasp, conceptual or cognitive metaphors can contribute to the quality of life to a relatively more concrete and structured concept. As cited before, conceptual metaphors as well as perceived interrelatedness in turn predicted meaning in life quality, particularly for individuals with a strong preference for well-structured and well-organized understanding, knowledge, and attitudes^[18]. Representation of quality of life metaphors is a mental representation of the materialization of the two concepts of quality and life together in the conceptualization system of students. In addition to the cognitive system, culture and language also influence the materialization of metaphorical concepts^[29]. In other words, this quality of life conceptualization model reflects intracultural features in addition to cognitive features specific to humans to understand abstract concepts of a material and objective model^[30]. like objects, place or location, path, and so on. Regarding the principle of embodiment and the empirical basis

of metaphors, quality of life can be improved by identifying the source domains of quality of life metaphors [31]. According to Lakoff [32], understanding the category of quality of life-based on the object and place or location is intrinsic and natural roots in the human brain. In another word, the human visual system has special receptors for perceiving objects, locations, and places, the neural pathway of which is the occipital lobe [33]. But there is no specific receptor in the brain for quality of life. Although this study in the field of quality of life will be new and pave the way for new studies, it has not been free from research limitations. Including, the researcher had to use health promotion students to study who were familiar with the dimensions of quality of life. Corona outbreak was another limitation of the study. Because the researcher had to interact with the participants online via WhatsApp voice recording. So she cannot interact with them presently. For future research, the researcher suggests that researchers use non-qualitative studies or they use other qualitative methods such as corpus analysis, content analysis, and so on, studying other students in different fields, and designing and making the quality of life training metaphorically protocols or designing and making the quality of life questionnaires based on conceptual or cognitive metaphors.

Conclusion

To conclude, it seems that quality of life can be understood metaphorically as object, place or location, path, direction, product, strength and power, and human and money source domains among health promotion students at Tehran Medical University. Quality of life as an object was the most frequent and quality of life as money is the fewer mappings in this study. This viewpoint reflects cultural and embodiment minds among Iranian health promotion students as literature showed. In another word, Persian language students think materially about quality of life, like all abstract concepts, and need conceptual metaphors to express it.

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