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MULTIMODAL METAPHORS OF SOCIAL ACTORS IN ENGLISH MENTAL HEALTH INFOGRAPHICS

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Abstract: This study investigates the multimodal metaphors utilized in conceptualizing social actors within English mental health infographics. Adopting the Metaphor Identification Procedure by the Pragglejaz Group (2007), combined with Bobrova's (2015) model for identifying multimodal metaphors, the research analyzes ten selected infographics to uncover metaphorical patterns. The interpretation of metaphorical meanings follows Kövecses's (2017) multi-level view framework, which examines metaphors across four levels: image schema, domain, frame, and mental space. At each level, the analysis unveils the intricate cognitive processes underlying the construction and interpretation of these metaphors. Two dominant metaphors were found: "AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN" and "AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE". These metaphors, recurrent across various infographics, offer distinct conceptualizations of mental health, emphasizing themes of nurturing and growth as well as control and navigation, respectively. This research contributes to the understanding of how metaphors shape discourse surrounding mental health and illustrates the value of the multi-level view in capturing the complexity of metaphorical thinking. Furthermore, the study demonstrates that the schematicity hierarchy framework can be effectively applied to multimodal metaphors, enabling a systematic interpretation of abstract meanings across visual and verbal elements and offering a more comprehensive understanding of metaphor use in contemporary discourse.

Keywords: multimodal metaphor, social actor, mental health infographics, multi-level view of conceptual metaphor

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ẨN DỤ ĐA PHƯƠNG THỨC THỂ HIỆN CÁC VAI XÃ HỘI TRONG ĐỒ HỌA THÔNG TIN TIẾNG ANH VỀ SỨC KHOẺ TÂM THẦN

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Tóm tắt: Nghiên cứu phân tích các ẩn dụ đa phương thức được sử dụng để miêu tả các vai xã hội trong đồ hoạ thông tin về sức khoẻ tâm thần bằng tiếng Anh. Nghiên cứu áp dụng quy trình nhận diện ẩn dụ của nhóm Pragglejaz (2007) kết hợp với mô hình nhận diện ẩn dụ đa phương thức của Bobrova (2015) để phân tích 10 đồ hoạ thông tin. Các ý nghĩa ẩn dụ được diễn giải theo Khung đa tầng của Kövecses (2017), xem xét ẩn dụ qua bốn cấp độ: lược đồ hình ảnh, miền, khung khái niệm và không gian tinh thần. Ở mỗi cấp độ, việc phân tích làm sáng tỏ các quá trình nhận thức phức tạp là cơ sở để xây dựng và diễn giải các ẩn dụ này. Hai ẩn dụ được tìm thấy là: "SỨC KHỎE TÂM THẦN CỦA CÁ NHÂN LÀ MỘT CÂY/KHU VƯỜN" và "SỨC KHỎE TÂM THẦN CỦA CÁ NHÂN LÀ MỘT CHIẾC XE". Những ẩn dụ này, lặp lại trong các đồ hoạ thông tin, cho thấy sự thể hiện khác nhau về sức khoẻ tâm thần, nhấn mạnh các chủ đề như: nuôi dưỡng và phát triển, kiểm soát và điều hướng. Nghiên cứu góp phần làm rõ cách ẩn dụ định hình diễn ngôn về sức khoẻ tâm thần và cho thấy giá trị của Khung đa tầng trong việc nắm bắt độ phức tạp của tư duy ẩn dụ. Ngoài ra, nghiên cứu cũng chứng minh rằng khung phân cấp lược đồ có thể được vận dụng hiệu quả vào phân tích ẩn dụ đa phương thức, từ đó cho phép diễn giải một cách có hệ thống các ý nghĩa trừu tượng trong cả yếu tố hình ảnh và ngôn từ, góp phần mang lại cái nhìn toàn diện hơn về việc sử dụng ẩn dụ trong diễn ngôn đương đại.

Từ khoá: ẩn dụ đa phương thức, vai xã hội, đồ họa thông tin về sức khỏe tâm thần, khung ẩn dụ ý niệm đa bậc

1. Introduction

In today's digital era, the intersection of language and visual representation has become increasingly significant. Amidst the navigation of complex issues such as mental well-being, infographics have emerged as a prominent form of multimodal communication. By combining textual content with visual elements, infographics serve as powerful tools for conveying messages effectively. In addition, the concept of multimodal metaphor, wherein the target and source domains are represented in different modes (Forceville, 1996), has also attracted growing scholarly interest. Research in this area has underscored the value of multimodal communication, particularly in understanding how language and visuals interact to construct meaning (Urios-Aparisi, 2009).

This article, entitled *"Multimodal metaphors of social actors in English mental health infographics",* investigates how social actors (particularly individuals with mental health issues) are depicted metaphorically through the interplay of linguistic and visual elements. Additionally, it aims to contribute to a deeper understanding of how language and visuals collaborate to shape public perceptions of mental health.

The study employs an integrated methodological framework, utilizing the Metaphor

Identification Procedure (MIP) developed by the Pragglejaz Group (2007), supplemented by Bobrova's (2015) model for identifying multimodal metaphors. Furthermore, it is grounded in Kövecses' (2017) multi-level view of conceptual metaphor, which interprets metaphorical meaning at varying levels of abstraction. To account for the role of context in shaping metaphor use, the analysis is also informed by Kövecses' (2020) Extended Conceptual Metaphor Theory, which emphasizes the dynamic interaction between context and schematic hierarchy.

The study will answer the two following questions:

(1) What dominant metaphors conceptualize social actors depicted in English mental health infographics?

(2) How are these metaphors construed via multi-level view framework?

2. Literature Review

2.1. An Introduction to Metaphor

Metaphor has long been a subject of inquiry in linguistic discourse, traditionally seen as a stylistic or rhetorical embellishment. However, this view has undergone significant evolution, particularly with the introduction of cognitive linguistics. According to Saeed (2003), traditional approaches often treat metaphor as secondary to literal language, requiring interpretation due to its deviation from standard usage. Classical thinkers like Aristotle (2001) viewed metaphor as a decorative device, while the Romantic era associated it with imagination and creativity. By contrast, cognitive linguistics reframes metaphor as central to human cognition, arising from our embodied experience and informing how we understand abstract concepts through familiar ones (Lakoff & Johnson, 1980). This interdisciplinary framework, rooted in cognitive science, views metaphor as a conceptual, rather than merely linguistic, phenomenon. The theory of conceptual metaphor (e.g., ARGUMENT IS WAR) demonstrates how people structure abstract domains through mappings from concrete ones, revealing metaphor's pervasive role in thought and language (Lakoff & Turner, 1989).

Key components of metaphor include the source domain (concrete, familiar) and target domain (abstract, less familiar), following the "A is B" structure (Langacker, 2002). Kövecses (2002) identifies common source and target domains in conceptual metaphors, such as HUMAN BODY, HEALTH/ ILLNESS, ANIMALS, and MONEY/ BUSINESS, providing a basis for understanding metaphorical structures and mappings in various contexts. Metaphorical mapping is grounded in physical experiences and culturally shaped knowledge (Kövecses, 2002). For instance, MORE IS UP or LESS IS DOWN arises from the physical correlation between quantity and verticality (Gibbs, 2017). These mappings are not symmetrical, with features transferred directionally from source to target. They are also systematic and often universal, although subject to cultural variation (Yu, 1995).

Metaphor serves not only rhetorical or aesthetic purposes but also reveals how individuals conceptualize reality. This theoretical grounding provides a lens for exploring metaphor in multimodal formats such as infographics, where visual and textual elements jointly construct meaning. As Forceville (2008) suggests, studying metaphor across modes broadens our understanding of how ideas are communicated, particularly in sensitive contexts like mental health.

2.2. Multimodal Metaphor

Conceptual Metaphor Theory (CMT, hereafter) has traditionally concentrated on verbal

metaphors, often overlooking nonverbal expressions. Scholars, including Lakoff and Johnson (1980), contend that if metaphors are fundamentally conceptual, they should transcend language and manifest in various modes of expression. This realization has prompted the exploration of pictorial and multimodal metaphors within the framework of CMT.

Pictorial metaphors, as discussed by Forceville (2008), depict both target and source domains visually and can take various forms, including contextual, hybrid, pictorial simile, and integrated metaphors. These variations reflect diverse ways of visually representing the relationship between target and source domains. Moreover, pictorial metaphors can be dynamic, occurring in moving images and enabling more fluid representations. Multimodal metaphor, as extended by scholars like Forceville (2009) expands beyond visual forms to incorporate written and spoken language, music, and non-verbal sounds. This shift from pictorial to multimodal metaphor involves representing domains across various sign systems or modes of perception, necessitating a nuanced understanding of different forms of communication.

Multimodal metaphor involves the representation of domains in multiple **modes** simultaneously, such as visual, verbal, and sonic. Forceville (2007) proposes a classification of eight modes, including spoken language, written language, pictures, music, non-verbal sound, smell, taste, and touch. In analyzing multimodal metaphors, it is essential to recognize the interrelationship among these modes, which can sometimes blur the boundaries between them. Moreover, the representation of domains can result from a single mode or the interaction of multiple modes. Simultaneity in presenting domains through different modes contributes to the construal of metaphors, although this simultaneity is not always obligatory in commercials.

Multimodal metaphors, as explored by Forceville (2009), offer notable advantages within the realm of mental health infographics. Through the integration of visual and verbal components, they foster varied interpretations and evoke heightened emotional responses, capitalizing on the immediacy of perception. In the context of mental health infographics, this blending of modes not only constrains potential interpretations but also facilitates cross-cultural recognition of metaphors. Such widespread acknowledgment enhances the efficacy of mental health communication across diverse audiences and platforms, underscoring the significance of multimodal metaphor research in this domain.

Moreover, the selection of source domains in multimodal metaphors is pivotal in shaping viewers' perceptions and responses to mental health infographics, as proposed by Forceville (2008). Creators strategically opt for source domains that resonate with the intended audience and align with the communication objectives. These source domains may correspond to specific mental health concepts, augmenting the clarity and effectiveness of the infographic. However, cultural factors, as underscored by Kövecses (2015, 2017), exert significant influence on metaphor interpretation, given that mappings between source and target domains are culturally contingent.

2.3. Multi-level View of Conceptual Metaphor

The multi-level, layered view of conceptual metaphor represents a significant advancement over the standard framework of CMT by offering a more nuanced and fine-grained account of how metaphors function across different levels of abstraction. While traditional CMT primarily focuses on the mapping between source and target domains, this extended perspective (Kövecses, 2017) introduces a hierarchical model that distinguishes between **image schemas, domains, frames, and mental spaces**.

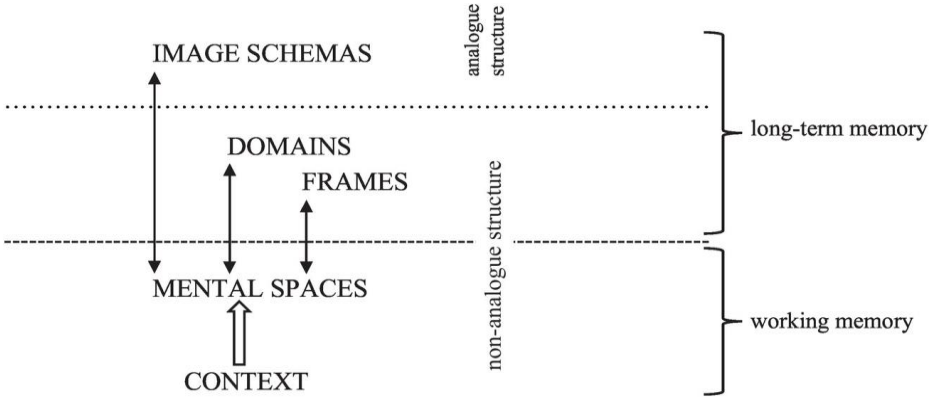
This layered approach provides a more comprehensive understanding of metaphorical

thought by unpacking the cognitive architecture underlying metaphor use. At the highest level, image schemas represent basic perceptual and motor patterns that underlie our conceptualizations. Domains, situated at an intermediate level, house conceptual metaphors that link specific aspects of experience. Frames contextualize situations, activating particular conceptual metaphors, while mental spaces organize our mental representations at the lowest level. By identifying and analyzing these distinct levels, the multi-level framework captures the complexity and flexibility of metaphor that standard CMT often overlooks.

Besides the analysis of the kinds of conceptual structures, the Extended CMT view (Kövecses, 2020) discusses other key ideas including kinds of meaning, kinds of metaphor and ontological level. Also, a key advancement is its detailed treatment of context, identifying four types (situational, discourse, bodily and conceptual-cognitive) and examining how these contexts influence metaphor use and schematicity hierarchy. This approach highlights the dynamic, context-dependent nature of metaphor.

Figure 1

Schematicity Hierarchy for Four Conceptual Structures (Kövecses, 2020, p. 105)



2.3.1. Image Schema

Image schemas, as defined by Johnson (1987), are recurring, dynamic patterns that emerge from our perceptual and motor experiences, providing coherence and structure to our understanding of the world. Unlike rigid mental images, these schemas are flexible, embodied, and prelinguistic in nature, forming the foundation of human cognition. Rooted in bodily interaction, linguistic experience, and historical context (Hampe, 2005), image schemas are typically acquired in infancy and relate to spatiotemporal relationships that guide action and perception. They are both static and dynamic, functioning across time and sensory modalities (Hedblom, Kutz, & Neuhaus, 2015). Internally structured yet adaptable, image schemas respond to diverse experiential contexts based on perceptual principles. When integrated with conceptual metaphor, they enable the mapping of sensory-motor experiences onto abstract domains (Johnson, 1987). As foundational anchors of our conceptual system, they synthesize multimodal information and underlie our understanding of concepts like space, motion, and containment (Hampe, 2005). Empirical support for image schemas comes from studies in spatial and cross-modal cognition, cognitive linguistics, and neuroscience. Their influence also extends beyond linguistics into fields such as interface design, artificial intelligence, and cognitive robotics (Wachowiak & Gromann, 2022).

Evans and Green (2006) offer a summary of image schemas associated with experiential grounding, as listed below:

Table 1

A Partial List of Image Schemas (Adopted from Evans & Green, 2006)

Experiential grounding	Image Schemas
SPACE	UP-DOWN, FRONT-BACK, LEFT-RIGHT, NEAR-FAR, CENTRE-PERIPHERY, CONTACT, STRAIGHT, VERTICALITY
CONTAINMENT	CONTAINER, IN-OUT, SURFACE, FULL-EMPTY, CONTENT
LOCOMOTION	MOMENTUM, SOURCE-PATH-GOAL
BALANCE	AXIS BALANCE, TWIN-PAN BALANCE, POINT, BALANCE, EQUILIBRIUM
FORCE	COMPULSION, BLOCKAGE, COUNTERFORCE, DIVERSION, REMOVAL OF RESTRAINT, ENABLEMENT, ATTRACTION, RESISTANCE
UNITY/ MULTIPLICITY	MERGING, COLLECTION, SPLITTING, ITERATION, PART-WHOLE, COUNT-MASS, LINK(AGE)
IDENTITY	MATCHING, SUPERIMPOSITION
EXISTENCE	REMOVAL, BOUNDED SPACE, CYCLE, OBJECT, PROCESS

2.3.2. Domain

In conceptual metaphor analysis, domains are essential for linking abstract concepts to concrete experiences, for example, mapping LIFE onto TRAVEL in the metaphor LIFE IS A JOURNEY. Evans and Green (2006), building on Langacker (1987), describe a domain matrix as the set of domains structuring a lexical concept, highlighting the interconnected nature of conceptual frameworks. Langacker (1987) also emphasizes the hierarchical organization of domains, revealing the layered complexity of conceptualization. This structural perspective deepens our understanding of how metaphors shape cognition and language.

2.3.3. Frame

In the realm of conceptual metaphor theory, Fillmore's frame semantics introduce the notion of a frame as a fundamental concept. A frame encompasses "*a cohesive system of interconnected concepts*", wherein understanding one concept necessitates grasping the entirety of its relational structure (Fillmore, 1982, p. 111). This highlights the holistic and interconnected nature of conceptual organization, offering deeper insight into how metaphors are cognitively grounded. For example, in the metaphor LIFE IS A JOURNEY, the TRAVEL frame includes elements such as destinations, routes, transportation, challenges and progress. Understanding the concept of JOURNEY within this frame requires grasping not only the idea of moving from one place to another but also the broader context of exploration, discovery, obstacles, and destinations.

2.3.4. Mental Space

Expanding upon the framework of CMT, Fauconnier (1997) introduces mental spaces as flexible, dynamic cognitive structures that emerge during thought and discourse. These include *generic spaces*, which provide abstract scaffolding applicable across contexts; *input spaces*, which contain specific information from different domains; and *blended spaces*, where elements from the input spaces are integrated to form novel conceptual structures. This process, central to the *conceptual blending* theory developed by Fauconnier and Turner (1998), explains how meaning arises from the interaction of multiple mental domains. By outlining these space types, Fauconnier's framework deepens our understanding of metaphor and blending, revealing

the complex cognitive processes that connect language, thought, and perception.

2.4. Social Actors

In mental health infographics, social actors are typically represented as individuals or groups who play a role in mental health outcomes or experiences. These actors can include:

Individuals are people who directly experience mental health challenges or who are affected by them, such as individuals with mental illnesses, their family members, friends, or caregivers. *Healthcare providers* are mental health professionals like psychiatrists, psychologists, counselors, therapists, and social workers who are often depicted as important actors in providing treatment, support, and guidance to those dealing with mental health issues. *Community support systems* include community organizations, support groups, advocacy groups, and volunteers who provide assistance, resources, and advocacy for individuals facing mental health challenges. *Educators and employers*, consisting of teachers, professors, employers, and HR professionals, are shown as key actors in promoting mental health awareness, providing accommodations, and creating supportive environments in educational and workplace settings. *Policy makers and government* (or legislators) are depicted as crucial actors in shaping mental health policies, funding mental health initiatives, and implementing regulations that affect mental health services and resources. *Media and influencers* (media outlets, journalists, bloggers, social media influencers, and celebrities) can influence public perception and awareness of mental health issues through their platforms and messaging. *Stigma and discrimination* (negative attitudes, stereotypes, and discrimination related to mental illness) are often represented as social factors that contribute to barriers in accessing care, seeking help, and fostering understanding and acceptance.

This study specifically focuses on the representation of individuals with mental health conditions to highlight their central role in mental health discourse. By examining how these individuals are portrayed in infographics, we can better understand the ways in which their experiences, challenges, and needs are communicated to the public. This focus is essential because the depiction of individuals directly impacted by mental health issues can influence public perceptions, shape policy responses, and inform the development of more effective, empathetic, and inclusive mental health services.

2.5. Research Gaps

Since Forceville (2008) introduced the notion of multimodal metaphor, this area of research has gained increasing attention, particularly in expanding the scope of conceptual metaphor theory to various forms of multimedia communication. Yang (2015) identifies two core objectives in multimodal metaphor studies: theoretical development and case-based analysis. Despite this growing interest, there remains a noticeable lack of contrastive research comparing multimodal metaphors across different cultural contexts. Only a few studies, such as those by Famelart (2010) and Fernandez (2011), have explored metaphor usage in advertisements across languages and cultures.

To support the systematic identification of metaphors in language, the Pragglejaz Group (2007) developed the Metaphor Identification Procedure (MIP), providing an explicit methodology for linguistic metaphor analysis. Extending this approach into the multimodal domain, Bobrova (2015) proposes practical tools for analyzing metaphors in commercials and other media formats, contributing to the analytical frameworks used in current studies.

Zhong, Wen, and Chen's (2023) bibliometric study "*Research Trends in Multimodal Metaphor: A Bibliometric Analysis*" presents a comprehensive overview of 397 publications

from 1977 to 2022. Their findings reveal three major research trends in multimodal metaphor: cognitive linguistic theory, pragmatics, and visual/multimodal rhetoric. These theoretical trajectories highlight different methodologies and conceptual frameworks used to explore how multimodal metaphors function across discourse genres. The study also emphasizes future directions, particularly the need for further theoretical development, cross-genre empirical research, and the study of metaphor's persuasive effects in argumentation.

Building on this broader landscape, recent research efforts have begun investigating metaphorical representation in the domain of mental health communication. For example, Knapton and Rundblad (2018) examine the use of metaphor in research contexts, while Magaña (2019) analyzes its role in psychiatric interviews. These studies underscore the significance of linguistic and cultural nuances in metaphorical expression. Similarly, Adams' (2023) *Monster Metaphors* critically examines how metaphor shapes societal perceptions of mental illness.

Despite these advances, several gaps remain. Firstly, although metaphors in mental health communication have been explored (Coll-Florit & Climent, 2022; Coll-Florit et al., 2021; Lawn et al., 2016; Lazard et al., 2016; Levitt, Korman & Angus, 2000; Mould, Oades & Crowe, 2010; Neil, 2005; Rofe, 2009; Tay, 2016; Warne & Stark, 2004), little attention has been given to *multimodal metaphors* in *infographics*, a popular genre in digital health communication. Secondly, while scholars like Knapton and Rundblad (2018) call for integrating discourse dynamics with multimodal analysis, few studies have adopted such interdisciplinary approaches. This integration could enrich our understanding of how metaphors evolve in real-time and influence meaning-making across modalities.

Thirdly, there is a noticeable absence of research focused on how metaphorical representation in infographics can *empower* individuals, particularly in terms of reducing stigma and encouraging help-seeking behavior. Although infographics have been widely studied in relation to education, health, and public engagement (Bilić & Georgaca, 2007; Chakravoti et al., 2018; Coughlan, 2021; Darcy, 2019; de Castro Andrade, 2018; Farthing & Priego, 2016; Knoll & Fuzer, 2019; Lee & Kim, 2016; Nor et al., 2021; Nunnally, 2007; Paterson, 2007; Pavlova & Berkers, 2020; Rieger, 2022), few have explicitly addressed their role in *mental health discourse*. Research exploring the intersection of these domains (mental health, infographics, and multimodal metaphor) remains extremely limited.

This gap presents a significant opportunity. While linguistic metaphor use in mental health has been extensively studied, multimodal and visual representations, especially within the infographic genre, have not been adequately examined. Understanding how metaphors operate in visual-textual formats could shed light on how mental health narratives are constructed, disseminated, and perceived in public discourse.

Recognizing these limitations, the present research is motivated by the need to investigate multimodal metaphors of social actors in English-language mental health infographics. This study aims to bridge the gap between cognitive linguistic theory, discourse studies, and multimodal communication, providing a more comprehensive understanding of the role of metaphor in mental health awareness and representation.

3. Methodology

3.1. Data

The data for this study consists of a curated collection of 10 mental health infographics sourced from reputable online platforms, encompassing English language materials. These

infographics were selected based on their relevance to mental health topics and their availability for analysis.

3.2. Methods

To systematically investigate metaphorical expressions in English mental health infographics, this study employs an integrated methodological framework combining the Metaphor Identification Procedure (MIP) developed by the Pragglejaz Group (2007) and the multimodal metaphor identification model proposed by Bobrova (2015). These two models are applied in tandem to address the first research question.

The MIP is used to identify metaphorical expressions in the verbal text of the infographics. This procedure involves four structured steps: (1) reading the full text to understand the general meaning, (2) identifying lexical units, (3) establishing each unit's contextual meaning and comparing it with its more basic meaning, and (4) marking the unit as metaphorical if a contrast between meanings exists. This consistent and replicable method ensures the accurate identification of verbal metaphors referring to social actors such as patients, doctors, family members, and caregivers.

To complement the analysis of verbal metaphors, Bobrova's (2015) procedure is adopted to detect visual and multimodal metaphors, particularly those involving the representation of social actors through images, symbols, and layout techniques. Bobrova's model, building upon Forceville's (2008) foundational criteria for multimodal metaphor, guides the identification of metaphorical mappings across modes when: (1) two phenomena belong to different conceptual categories, (2) are expressed in more than one semiotic mode (e.g., image and text), and (3) encourage viewers to project salient features from one onto the other. Her three-step method includes: (1) identifying potential metaphors using techniques such as context manipulation, juxtaposition, and transformation; (2) identifying the cognitively salient features that guide metaphorical projection; and (3) verbalizing the source–target domain mapping to clarify the underlying metaphor. This approach is crucial for understanding how visual portrayals of social actors are metaphorically structured and interpreted.

To answer the second research question, the study draws on Kövecses' (2017) multi-level view of conceptual metaphor, which provides a comprehensive framework for interpreting how metaphors function at various levels of abstraction. By combining these methodological approaches, this study develops a rich, multi-layered analysis of the metaphorical representations of social actors in English mental health infographics, offering insights into both the metaphors used and their structure, projection and interpretation across modes.

3.3. Scope of the Study

This small-scale study focuses specifically on individuals with mental health issues as the primary social actors. These individuals are at the center of the analysis, as the study seeks to understand their experiences, needs, and challenges within the broader context of mental health care. Within this framework, other social actors such as healthcare providers, family members, and support systems play important roles in supporting and influencing the well-being of individuals.

3.4. Data Analysis Procedure

Two major steps are carried out in this study. First, each mental health infographic is closely examined to identify metaphorical representations of individuals (social actors), with attention to both linguistic keywords and visual cues. Second, each metaphor is analyzed at four

distinct levels: image schema, domain, frame, and mental space: (1) Image schema (inferred from underlying patterns); (2) Domain (individuals with mental health issues as the target domain); (3) Frame (broader experiential or cultural context) and (4) Mental space (local, situation-specific metaphoric scenarios).

4. Findings and Discussions

4.1. Dominant Multimodal Metaphors Conceptualizing Social Actors in English Mental Health Infographics

Two identified generating metaphors represent individuals, the primary social actors within the corpus. These metaphors provide insights into how individuals are portrayed and understood within the context of these mental health infographics.

(1) AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN.

(2) AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE.

The first and most prevalent metaphor depicts an individual's mental health as a tree or garden, with a frequency of 9 out of 10 occurrences. This metaphor suggests a complex and dynamic understanding of mental health, emphasizing growth, nurture, and cultivation. The image of a tree or garden suggests that mental health requires ongoing care and attention, much like tending to the needs of plants to ensure their flourishing.

Table 2

Mappings of AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN

Source Domain (TREE/GARDEN)	Target Domain (AN INDIVIDUAL'S MENTAL HEALTH)
Growth of plants	Development and improvement of mental well-being
Watering/nurturing	Taking care of mental health (self-care, support)
Flowers, leaves, greenery	Positive thoughts, emotional flourishing
Withered leaves/dry tree	Mental distress, emotional burnout
Sunshine, light, rain	Mental health support, helpful resources
Garden maintenance	Ongoing mental health care and attention
Seasons/ life cycle of a tree	Changes and stages in mental health over time
Splitting of a tree	Mood swings or mental health imbalance
Head or brain represented as a plant/garden/tree	Mental state or cognition as part of nature needing care

In the first infographic (coded as E1), the visual component portrays a man watering flowers on the head of a woman, symbolizing the woman's head as a garden being nurtured. This visual representation aligns with the identified multimodal metaphor of AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN. In this metaphor, the source domain is represented by the visual mode, where the woman's head serves as the source domain, symbolizing the mental state or well-being of an individual. The act of watering the flowers on her head conveys the idea of nurturing and tending to one's mental health, akin to caring for a garden to promote growth and vitality. Furthermore, the verbal component of the infographic reinforces this metaphorical interpretation. Phrases such as "*pro tips for mental health awareness*" and "*find nature*" suggest the importance of proactive measures and connecting with natural elements for mental well-being. The mention of "mental illness awareness week" indicates an emphasis on raising awareness and understanding surrounding mental health issues. Additionally, the use of the pronoun "you" in providing tips implies a direct address to

the audience, emphasizing personal responsibility and agency in maintaining mental health.

In several of the infographics (E2, E3, E6, E7, E8, E9, and E10), a consistent metaphorical theme emerges, depicting an individual's mental health as akin to a garden or a tree. This metaphor is conveyed through both visual and verbal elements. For instance, in E2, the visual representation involves a woman's head embedded with various types of flowers and plants, evoking the image of a garden. Similarly, in E3, mental health improvement is visually depicted through a woman's head transforming into a tree adorned with leaves, symbolizing growth and vitality. Additionally, the use of a light bulb in E3 suggests enlightenment or clarity, further reinforcing the notion of improving mental well-being.

Moreover, the metaphor of mental health over the life course is articulated in E5 through a silhouette of a big tree, accompanied by verbal descriptions of different stages of mental health problems over time. This metaphorical representation emphasizes the dynamic nature of mental health and its evolution throughout one's lifespan. Meanwhile, E6 presents a vivid visual dichotomy between distress and care, with one half depicting a thunderstorm and an unpleasant expression, while the other half portrays nurturing elements, such as watering, light, and a happy face, symbolizing the contrast between mental distress and well-being.

E8 offers a specific representation of bipolar disorder, with an individual visually depicted as a tree split into two halves, one with dry leaves and the other with green leaves, symbolizing the characteristic mood swings of the disorder. Furthermore, E9 combines verbal cues of caring for mental health with a visual representation of a brain adorned with flowers and green growth, reinforcing the metaphor of the brain as a garden that requires nurturing.

Lastly, in E10, the phrase "*Your mental health matters*" is visually represented by an open brain being watered, from which green leaves sprout, symbolizing the need to nurture and care for one's mental well-being. Overall, these infographics employ a consistent metaphorical language to communicate the complexities of mental health, utilizing visual and verbal elements to depict the concept of mental well-being as analogous to the growth and care of a garden or a tree.

Table 3

Mappings of AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE

Source Domain (AN AUTOMOBILE)	**Target Domain (AN INDIVIDUAL'S MENTAL HEALTH)**
Monthly MOT check (vehicle inspection)	Regular self-check or mental health assessment
Steering	One's direction in life or emotional control
Pressure	Psychological pressure or stress levels
Brakes	Ability to slow down, stop, or take breaks to prevent burnout
Electricals	Cognitive and neurological functions (brain activity, thinking, focus)
Body/structure	Physical well-being and the external manifestations of mental state
Fuel	Energy levels, motivation, or emotional resources
Seat belt	Self-protection, safety mechanism, emotional boundaries
Mechanic examining the vehicle	Mental health professionals, or supportive others
Woman hugging herself near the word "seatbelt"	Self-care and emotional self-support as personal protection
Brain placed on car counter	Mind conceptualized as a machine needing regular care

	and attention
Car parts	Components of mental well-being that require maintenance and balance

However, the second metaphor, with a much lower frequency of occurrence, presents an individual's mental health as an automobile. This metaphor introduces a semantic tension within the discourse surrounding mental health, contrasting with the nurturing and organic imagery of the TREE/GARDEN metaphor. The AUTOMOBILE metaphor may connote notions of control, speed, and mechanical functioning, highlighting potential tensions between the natural complexities of mental health and the desire for quick fixes or technological solutions.

In infographic E4, the metaphorical representation of mental health takes on a distinctly mechanical theme, blending verbal and visual elements to convey the concept of self-care and monitoring through the lens of a vehicle inspection. The verbal component, with phrases like "*how to give yourself a monthly mental health MOT check*", employs terminology reminiscent of a vehicle inspection, such as "*steering"*, "*pressure*", "*breaks*", "*electricals*", "*body/structure*", "*fuel*", and "*seat belt*". Each term is associated with aspects of mental health, drawing parallels between the maintenance of a vehicle and the upkeep of one's mental well-being. Visually, the infographic presents a brain in the place of a car on a counter, with two mechanicians conducting checks. One mechanician installs a wheel, symbolizing the importance of steering one's mental health in the right direction, while the other examines different parts of the brain, mirroring the inspection of various components in a vehicle. Simple drawings of car parts next to each term reinforce the metaphor and aid in understanding the analogy between mental health and vehicle maintenance.

Notably, the inclusion of a woman hugging herself next to the term "*seat belt*" adds a layer of emotional resonance, suggesting the importance of self-care and protection in safeguarding one's mental well-being. This visual representation underscores the notion of mental health as a vital aspect of self-preservation and safety.

While the representation of metaphors in the discussed infographics undoubtedly carries ideological implications and serves to raise awareness and direct public action towards mental health, it is important to note that these aspects are not the primary focus of the current study. The study primarily centers on identifying and analyzing the dominant multimodal metaphors used to conceptualize social actors in English mental health infographics.

However, it is crucial to acknowledge that the choice of metaphors in these infographics is not arbitrary and reflects broader societal attitudes, beliefs, and ideologies surrounding mental health. By portraying mental health through metaphors such as a tree/garden or a vehicle inspection, these infographics may seek to convey specific messages or evoke particular responses from their audience. For instance, the metaphor of a tree/garden may promote the idea of nurturing and caring for one's mental well-being, encouraging individuals to take proactive steps towards self-care and seeking support when needed. On the other hand, the metaphor of a vehicle inspection may underscore the importance of regular self-assessment and maintenance of mental health, framing it as a practical and tangible aspect of overall well-being.

Moreover, these metaphors have the potential to challenge existing stigma and misconceptions surrounding mental health by providing alternative frameworks for understanding and discussing it. By associating mental health with familiar concepts from nature or everyday life, these infographics may help destigmatize mental illness and promote a more inclusive and supportive attitude towards individuals struggling with their mental well-being.

While the broader societal implications of these metaphors are certainly noteworthy, the

current study focuses primarily on their linguistic and visual manifestations within the context of English mental health infographics. Nonetheless, acknowledging the potential ideological impact of these metaphors adds depth to our understanding of how mental health is represented and perceived in contemporary discourse.

4.2. The Construction of Multimodal Metaphors in Multi-Level View Framework

The semantic tension between these two metaphors reflects the diversity of perspectives and approaches to understanding mental health within the infographics. While the TREE/GARDEN metaphor emphasizes holistic care and growth over time, the AUTOMOBILE metaphor suggests a more mechanistic or technologically driven view of mental health management.

4.2.2. Image Schema

In the context of the identified metaphors, image schemas play a crucial role in shaping our understanding and interpretation. The metaphor AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN can be linked to various image schemas, such as CONTAINMENT (container, in-out), BALANCE (equilibrium), and LOCOMOTION (momentum, source-path-goal). For instance, the idea of nurturing and caring for mental health, represented by the image of a garden, can be associated with the CONTAINMENT schema, wherein the individual's mental state is contained within the boundaries of the garden, and the BALANCE schema, wherein the balance and equilibrium of the garden reflect the individual's mental well-being.

Similarly, the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE invokes image schemas related to locomotion and force, such as MOMENTUM, SOURCE-PATH-GOAL, and FORCE (compulsion, resistance). The automobile metaphor implies movement, control, and navigation, suggesting that mental health is subject to external forces and requires active management and direction.

Furthermore, the visual and verbal components of the infographics contribute to the instantiation of these image schemas. For example, in the infographic coded as E1, the visual representation of a man watering flowers on the head of a woman aligns with the tree/garden metaphor, evoking image schemas related to containment and growth. Similarly, in the infographic coded as E4, the depiction of a brain on a counter being checked by mechanicians draws on image schemas associated with containment and locomotion, as well as force and balance.

4.2.3. Domain

In the realm of conceptual metaphor analysis, domains serve as the foundation for structuring our understanding of abstract concepts by linking them to more concrete experiential domains. The identified metaphors exemplify this process, where the domain of mental health is mapped onto the domains of a tree/garden and an automobile, respectively.

In the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN, the LIFE domain (mental health) is mapped onto the TRAVEL domain (tree/garden). Here, the domain matrix encompasses mental health as the primary domain, structuring the conceptual framework for understanding various aspects of mental well-being. Within this matrix, the domain of a tree/garden serves as a concrete experiential domain that provides a rich set of associations and attributes to conceptualize mental health. The hierarchical organization of domains, as proposed by Langacker (1987), reveals the interconnectedness and complexity underlying this metaphorical mapping. The tree/garden domain offers layers of meaning and

associations, such as growth, nurture, care, and flourishing, which contribute to our understanding of mental health as a dynamic and multifaceted concept.

Similarly, in the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE, the LIFE domain (mental health) is mapped onto the TRAVEL domain (automobile). This mapping suggests a different set of associations and attributes compared to the tree/garden metaphor. The domain matrix for mental health encompasses the notion of movement, control, and navigation, mirroring the characteristics of an automobile. Within this framework, mental health is conceptualized as a journey or voyage, where individuals navigate through various experiences and challenges to maintain well-being. The hierarchical organization of domains illuminates the layers of complexity inherent in this metaphorical mapping, revealing how different facets of mental health are structured within the conceptual framework of an automobile.

4.2.4. Frame

Frames play a crucial role in structuring our understanding of abstract concepts by providing cohesive systems of interconnected concepts. In the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN, the frame of a garden encompasses a cohesive system of interconnected concepts related to nurturing, growth, care, and vitality. Within this frame, various concepts such as planting, watering, pruning, and flourishing are linked together, forming a comprehensive understanding of mental health. The frame of a garden also encompasses broader concepts such as seasons, weather, and environmental factors, which contribute to the overall well-being of the garden. Understanding the concept of mental health within this frame requires grasping not only the idea of nurturing and caring for one's well-being but also the broader context of growth, resilience, and environmental influences.

Similarly, in the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE, the frame of travel includes interconnected concepts related to movement, control, navigation, and maintenance. Within this frame, concepts such as routes, destinations, obstacles, and experiences along the way are linked together, forming a holistic understanding of mental health as a journey. The frame of an automobile also includes concepts such as speed, direction, and road conditions, which contribute to the overall experience of the journey. Understanding the concept of mental health within this frame requires grasping not only the idea of navigating through life's challenges but also the broader context of control, adaptability, and maintenance.

In both metaphors, the frames of a tree/garden and an automobile provide rich networks of interconnected concepts that contribute to our understanding of mental health. These frames include not only the core concepts of nurturing and growth but also broader contextual factors that shape the experience of mental well-being. By explaining the role of frames, researchers gain deeper insights into how conceptual metaphors are constructed and comprehended within the context of complex cognitive structures.

4.2.5. Mental Space

Fauconnier’s concept of mental spaces provides a framework for understanding how cognitive processes such as thinking and discourse give rise to dynamic cognitive constructs. Within the framework of mental spaces, the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN can be understood through the lens of generic spaces and blended spaces. The generic space of a garden represents an abstract conceptual domain that can be applied across different contexts, providing a foundational structure for

conceptualization. This generic space encompasses various elements such as nurturing, growth, care, and vitality, which contribute to our understanding of mental health. Additionally, the metaphor involves blended spaces, where elements from the domains of mental health and gardening are integrated to create a novel conceptual configuration. For example, the integration of concepts like watering, pruning, and flourishing from the domain of gardening with concepts like nurturing and growth from the domain of mental health results in a blended space that captures the complex dynamics of mental well-being within the context of a garden.

Similarly, the metaphor AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE also operates within the framework of mental spaces, involving generic spaces, blended spaces, and two input spaces. The generic space of travel represents an abstract conceptual domain that can be applied across different contexts, providing a foundational structure for conceptualization. This generic space encompasses elements such as movement, control, navigation, and maintenance, which contribute to our understanding of mental health as a journey. Additionally, the metaphor involves blended spaces, where elements from the domains of mental health and travel are integrated to create a novel conceptual configuration. For example, the integration of concepts like routes, destinations, obstacles, and experiences from the domain of travel with concepts like navigating through challenges and maintaining well-being from the domain of mental health results in a blended space that captures the complex dynamics of mental well-being within the context of an automobile journey.

In conclusion, the exploration of the two conceptual metaphors, AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN and AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE, within the multi-level view framework provides valuable insights into the nuanced ways in which mental health is conceptualized and represented in English mental health infographics. Through the lens of **image schema**, we discern the dynamic patterns underlying these metaphors, where the nurturing and organic imagery of a tree/garden metaphor contrasts with the control-oriented and mechanistic imagery of an automobile metaphor. **Domains** serve as the foundational structures that link abstract concepts of mental health to concrete experiential domains, revealing the cognitive frameworks that shape our understanding of mental well-being. **Frames** offer a holistic perspective on conceptual organization, highlighting the interconnectedness of individual concepts within broader cognitive frameworks. The frames of a tree/garden and an automobile encapsulate rich networks of interconnected concepts, shedding light on how mental health is perceived and comprehended within the context of nurturing growth or navigating challenges. Additionally, the concept of **mental spaces** expands upon our understanding of metaphorical reasoning and conceptual blending. Mental spaces, including generic spaces and blended spaces, offer novel conceptual configurations that capture the complex dynamics of mental health, integrating elements from disparate domains to create nuanced representations.

5. Conclusion

This study investigated multimodal metaphors used to conceptualize social actors in 10 English mental health infographics by adopting MIP by the Pragglejaz Group (2007) combined with Bobrova’s (2015) model. The interpretation of metaphorical meanings was guided by Kövecses's (2017) multi-level view framework.

The findings revealed two dominant metaphors used to conceptualize social actors in English mental health infographics: AN INDIVIDUAL'S MENTAL HEALTH IS A TREE/GARDEN and AN INDIVIDUAL'S MENTAL HEALTH IS AN AUTOMOBILE. The

former metaphor emphasizes nurturing, growth, and care, while the latter metaphor emphasizes control, navigation, and maintenance. These metaphors were prevalent across multiple infographics, suggesting their significance in representing mental health within the discourse.

To analyze these metaphors, the paper employed Kövecses' (2017) multi-level view framework, which comprises four levels: image schema, domain, frame, and mental space. At the image schema level, recurring patterns underlying the metaphors were identified, such as the organic growth of a tree/garden and the mechanistic functionality of an automobile. These patterns serve as the foundation for conceptual mappings. At the domain level, the analysis explored how abstract notions of mental health are grounded in concrete, experiential domains. The tree/garden metaphor connects mental health to the concepts of nurturing and growth, while the automobile metaphor links mental health to the concepts of control and navigation. The frame level involved examining broader systems of related concepts that structure the metaphors, revealing how each metaphor brings with it a network of culturally and experientially shaped associations that influence the understanding of mental health. The frames of a tree/garden and an automobile encompass rich networks of associations, shaping how mental health is perceived and comprehended. Finally, at the mental space level, the metaphors were shown to construct dynamic conceptual configurations, blending elements from distinct domains to create nuanced and context-sensitive representations of mental health. These mental spaces allow for flexible and creative interpretations that reflect the complexity of mental health experiences.

The research highlights the significance of multimodal metaphors in conceptualizing social actors in English mental health infographics. Through Kövecses' multi-level view framework, deeper insights were gained into how these metaphors are constructed and interpreted across image schema, domain, frame, and mental space. Understanding the cognitive mechanisms underlying metaphorical reasoning can enhance the comprehension of mental health representations in visual and verbal modalities, ultimately contributing to the discourse on mental health awareness and advocacy. Furthermore, this study demonstrates the applicability of the schematicity hierarchy framework in analyzing multimodal metaphors, showing that abstract meanings can be systematically interpreted across visual and verbal elements. The findings suggest that Extended CMT can be effectively applied not only to verbal metaphors but also to multimodal representations, providing a deeper insight into the use of metaphors in modern discourse.

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APPENDIX

10 English Mental Health Infographics

(Please scan the QR code for 10 selected infographics analyzed in the study)