LIANG YIBO

Doctoral School of Linguistics, Eötvös Loránd University
belindaliang96@163.com
https://orcid.org/0009-0000-9543-2938

Liang Yibo: War Metaphors in Cancer Treatment Narratives by Chinese Cancer Survivors on Douyin Platform
Alkalmazott Nyelvtudomány, Különszám, 2025/1. szám, 219–236.
doi: http://dx.doi.org/10.18460/ANY.K.2025.1.012

War Metaphors in Cancer Treatment Narratives by Chinese Cancer Survivors on Douyin Platform

Abstract: This study examines war metaphors in Chinese cancer survivors' Douyin self-narratives, exploring their conceptualization and variations by cancer stage, age, and gender. Using a mixed-methods approach, it analyzed 320 videos (2022–2024) from 187 users, combining quantitative corpus analysis (with chi-square tests) and qualitative thematic analysis. War metaphors were identified via the Metaphor Identification Procedure (MIP), guided by Conceptual Metaphor Theory (Lakoff & Johnson, 1980) and Frame Semantics (Fillmore, 1982). Key findings show war metaphors form a systematic cross-domain mapping: war elements (e.g., combatants, weapons, strategies, victories/defeats) map onto cancer treatment experiences (e.g., medical teams/patients, therapies, treatment plans, remission/progression). Quantitatively, significant differences appeared: middle-stage patients (40.4%) used them most, reflecting intense treatment pressure; young patients aged 20–35 (56.8%) had the highest usage, linked to their agency-focused life conceptions and responses to survival vulnerabilities. No significant gender differences were found. Qualitative analysis revealed these metaphors are motivated by cognitive, historical-cultural and rhetorical factors.

Keywords: war metaphor, cancer treatment, Conceptual Metaphor Theory, Chinese cancer survivors, Frame Semantics Theory

1. Introduction

Metaphor offers key intellectual and linguistic tools for communicating intense emotional experiences, reflecting past experiences and shaping perceptions of present and future ones (Deng et al., 2021). Cancer is China's leading cause of death, though formal treatment has improved most patients' prognosis amid economic and medical advances (Cao et al., 2022). Yet many survivors face post-treatment psychological distress, including pain, ongoing tests/treatments, extended hospital stays, and fear of recurrence.

With internet growth, social media has become vital for cancer survivors to share experiences and exchange information. As of December 2023, China had over 1 billion short video users (94.8% utilization rate), per the China Internet Information Center's 51st report. Douyin, a major short video platform, integrates diverse survivors' experiences, offering new social and support channels.

Notably, Douyin's cancer narratives often use war metaphors: patients frame their journey as a battlefield, the body as contested territory, and the disease as an

adversary to confront and defeat. This framing amplifies emotional impact, highlighting courage, resilience, and determination against a formidable foe.

2. Literature Review

2.1. Core Metaphor Theories

2.1.1. Conceptual Metaphor Theory

Conceptual Metaphor Theory (CMT), pioneered by Lakoff and Johnson (1980), posits that metaphors are not merely linguistic devices but fundamental to human cognition - shaping not just language expression but the entire spectrum of human thinking and action. At its core, CMT argues that human conceptual systems are inherently metaphorical, redefining metaphor from a rhetorical art to a foundational cognitive tool that structures concept formation and reality perception (Lakoff & Johnson, 1980). This theoretical shift is critical: metaphors enable humans to navigate abstract experiences by grounding them in concrete knowledge, a function particularly vital in contexts like illness, where intangible phenomena (e.g., pain, uncertainty) demand tangible framing.

Pinker (2010) elucidates this cognitive utility, noting that humans' capacity for metaphor "undoubtedly allows us to conquer cognitive limitations and develop abstract thinking" - a point amplified in illness discourse, where metaphors transform the abstract threat of cancer into manageable concepts. Kövecses (2010) further clarifies CMT's mechanism: metaphor operates as "one-way cross-domain mapping," projecting knowledge from specific source domains (e.g., war) to abstract target domains (e.g., cancer treatment). This mapping is not arbitrary but rooted in embodied and cultural experience, explaining why online cancer narratives on platforms like Douyin repeatedly draw on "war" as a source domain - its concrete elements (adversaries, strategies, victories) provide a shared framework for articulating treatment struggles (Benczes, 2020).

In digital contexts, CMT's explanatory power deepens: online illness narratives leverage metaphor's cross-domain mapping to foster communal understanding. For instance, Douyin users frame chemotherapy as "bombardment" (mapping "treatment" to "military action") not only to make medical processes intelligible but to signal solidarity - inviting others to recognize shared experiences (Mohd Jamil et al., 2022). This aligns with Semino's (2017) corpus findings that war metaphors in cancer discourse serve dual cognitive and social functions: they simplify abstract suffering and build collective resilience, a dynamic uniquely amplified by the interactivity of online platforms.

2.1.2. Frame Semantics Theory

Frame Semantics, developed by Fillmore (1982), views meaning as embedded in interconnected "frames" - structured concept systems where understanding one element requires activating the entire related network. It posits linguistic meaning

as inherently contextual, rooted in frames' cultural and experiential knowledge (Fillmore, 2006). For example, interpreting "battle" demands activating the broader "war frame" with concepts like adversaries, weapons, and outcomes.

In illness discourse, Frame Semantics explains the coherence of war metaphors in cancer narratives. A Douyin user calling cancer cells "invaders" activates a frame including "defenders" (immune system/medical teams), "fortifications" (body tissues), and "counterattacks" (treatment), making the metaphor intelligible beyond literal wording (Fillmore, 1982). This is critical online, where brevity requires metaphors to carry dense shared meaning: phrases like "holding the line" (against cancer) use the war frame to convey sustained resistance concisely (Benczes, 2020).

Semino's (2017) corpus research supports its utility in illness discourse, showing cancer patients and caregivers use stable frame elements to coordinate narratives. This stability enables communal understanding on platforms like Douyin, as the war frame's core elements (adversaries, strategies, solidarity) are culturally salient. Thus, this study develops a conceptual system linking war and cancer treatment as Table 1.

Table 1. War metaphor framework

	War	Cancer treatment
event participants	Our side, enemy, army, alliance, general, soldier, Fighter, warrior, invader, ...	Doctors, nurses, patient's family； patients, medical volunteers
event equipment	Weapons, ammunition, military expenditures, defense lines, shields...	Medicines, technology, funding, immune system...
Strategic Approach	Strategy, tactics...	Treatment plans, precaution...
event preparation	Military drills, reconnaissance missions, troop deployment...	Pre-op preparations, treatment education； diagnostic workups, staging， treatment scheduling...
event process	Attacks, fortification, blockades...	Surgery, chemotherapy administration， palliative care,tumor embolization, hormone therapy...
event result	Victory, defeat, casualties, reconciliation...	Recovery, deterioration, death, continuation of illness…
event type	Total war, local war, protracted war, critical war, A tug-of-war, a war without gunpowder...	Acute diseases, chronic diseases, epidemics, comprehensive treatment, local treatment...

2.2. Cancer-Specific Metaphors: From Clinical Research to Digital Platforms

Early research established metaphors as integral to illness communication. Gibbs and Franks (2002) found that cancer patients use metaphors like “body as a broken machine” to articulate embodied experiences, while Degner et al. (2003) linked “conflict” metaphors to higher anxiety, underscoring their psychological stakes.

Semino (2017) - correcting earlier pronoun errors - pioneered corpus-based analyses of cancer metaphors, identifying “war” as a dominant type that reflects cultural narratives of control. Digital extensions of this research show online contexts intensify war metaphors. Benczes (2020) attributed this to social media’s emphasis on communal storytelling, while Mohd Jamil et al. (2022) highlighted how multimodal elements (e.g., IV bags labeled "ammunition") reinforce frame mappings. For Douyin’s short-video format, war metaphors simplify complex narratives into digestible, emotionally resonant content - aligning with both CMT and frame semantics by leveraging familiar source domains to make abstract illness experiences meaningful.

3. Methodology

3.1. Research Design

This research employs a mixed-methods framework (Creswell & Clark, 2017) to examine war metaphors within cancer survivor narratives on Douyin. Quantitative methodologies - specifically corpus analysis and statistical testing - detect recurrent patterns in metaphor frequency and distribution, while qualitative approaches (metaphor annotation and thematic analysis) investigate contextual embedding and functional deployment.

3.2. Data Collection

3.2.1. Sampling and Inclusion Criteria

Data were collected from Douyin, China’s largest short-video platform, due to its prominence in cancer survivor communities (Li et al., 2021) and the public accessibility of user-generated content. The sampling frame included:

Search key terms: Chinese keywords related to cancer survivorship, such as 癌症康复 (cancer recovery), 抗癌经历 (anti-cancer experience), and 与癌共存 (living with cancer).

Time frame: Videos posted between January 2022 and December 2024, ensuring coverage of diverse treatment stages and pandemic-era experiences.

Inclusion criteria: Videos explicitly narrating personal cancer experiences (≥30 seconds), containing at least one metaphorical reference to treatment, and publicly accessible (no private accounts).

Exclusion criteria: Videos focused solely on medical advice, celebrity stories, or non-personal narratives (e.g., institutional accounts).

A final dataset of 320 videos was selected, representing 187 unique users (92 female, 95 male) aged 25–78 (M = 46.2). Stratified sampling ensured proportional representation across cancer types (e.g., breast, lung, colorectal) and treatment stages (chemotherapy, surgery, post-recovery), addressing potential selection bias (Silverman, 2020). Ethical approval was obtained from the institutional review board, with all data anonymized (e.g., usernames redacted) to protect user privacy (Markham & Buchanan, 2012).

3.3. Metaphor Identification and Annotation

3.3.1. MIP

Metaphors were identified using the Metaphor Identification Procedure (MIP) (Pragglejaz Group, 2007), a widely validated tool for systematic metaphor analysis. The steps were:

Extract lexical units: All content words (nouns, verbs, adjectives) in the transcriptions were isolated.

Determine basic meaning: Using the Modern Chinese Dictionary (7th ed., 2020) and contextual analysis, the literal meaning of each unit was established (e.g., 战斗 [battle] literally refers to "armed conflict").

Identify metaphorical use: A unit was coded as metaphorical if its contextual meaning (e.g., 与癌症战斗 [battling cancer]) differed from its basic meaning but could be understood via cross-domain mapping (e.g., cancer treatment → war).

Example: The phrase 化疗就像轰炸 (chemotherapy is like bombing) was coded as a war metaphor, where "chemotherapy" (target domain) is understood through "bombing" (source domain: war).

3.4. Coding Framework

Annotations were guided by a thematic coding scheme adapted from Semino et al. (2018), with categories including:

Source domain elements: War-related concepts (e.g., 敌人 [enemy; cancer cells], 武器 [weapon; drugs]).

Function: Emotional (e.g., expressing resilience), communicative (e.g., explaining treatment)

Multimodal cues: Visual (e.g., military imagery) or paralinguistic (e.g., tone of determination) elements reinforcing metaphors (Forceville, 2009).

3.5. Quantitative Analysis

This part explores relationships between war metaphor use and key variables via two approaches. First, correlation analyses examined associations with variables like treatment stage - e.g., whether chemotherapy correlates with more metaphors such as 轰炸 [bombardment]. Second, cross-tabulations explored links between metaphor functions (e.g., emotional vs. communicative) and demographics like

age. Variables were operationalized to fit research objectives. Metaphor frequency was calculated as the number and proportion of sentences per subgroup, with samples grouped by cancer stage, age, and gender. Descriptive statistics (frequencies, percentages) summarized distribution across groups. Inferential analysis used chi-square tests to identify significant patterns, with the significance level set at $\alpha = .05$ (Field, 2018), consistent with standard social science methods.

3.6. Qualitative Analysis

This part complements quantitative findings by exploring war metaphors' contextual meanings. Using Braun & Clarke's (2006) thematic analysis, researchers coded transcripts and visual content to examine three interconnected dimensions. The first focused on narrative roles, analyzing how metaphors position survivors - e.g., framing them as 战士 [warriors] to emphasize resilience or 受害者 [victims] to highlight vulnerability. The second addressed cultural nuances, exploring adaptations to Chinese contexts like 中西医结合如联合作战 [integrative medicine as joint warfare], reflecting the integration of traditional Chinese and biomedicine. The third explored multimodal interplay, analyzing how visual elements (e.g., hospital IV bags labeled 弹药 [ammunition]) or paralinguistic cues (e.g., fist-clenching when referencing 战斗 [battle]) reinforce metaphorical meaning (Forceville & Urios-Aparisi, 2009).

4. Data Analysis and Results

4.1. Qualitative part

The analysis of war metaphors in Douyin cancer narratives is rooted in Fillmore's Frame Semantics, which posits that meaning is derived from interconnected "frames" - networks of concepts where activating one element triggers the entire system (Fillmore, 1982, 2006). For cancer discourse, the "war frame" serves as a foundational structure, encompassing event participants, equipment, strategies, processes, and outcomes that map systematically to the "cancer treatment frame" (see Table 1). This framework guides the following analysis of how specific elements of the war frame are instantiated in Douyin users' narratives, starting with event participants - the individuals and entities involved in both the metaphorical "war" and the actual experience of cancer treatment.

4.1.1. Event participants

Findings show the metaphorical “war” framework in cancer treatment divides participants into “allies” and “enemy.”

(1)

70 岁的老母亲为了照顾我，不得不又一次成了战士。

qīshīsuì	*dē*	*lǎomǔqīn*	*weìlē*	*zhàogù*
wǒ	*bùdébù*	*yòuyícì*	*chénglē*	*zhànshi*
70-year-old-ADJ	AUX	mother	in.order.AUX	take.care
I-OBJ.1SG	have.AUX	again-ADV	become	warrior
“My 70-year-old mother had to become a warrior again in order to take care of me.”				

Metaphor：Cancer treatment is war
Patients' Family is warrior

In this above sentence, the role of the mother is mapped to that of a warrior. The mapping between the source domain cancer treatment and the target domain war allows for a vivid portrayal of the challenges and strength required in providing care.

4.1.2. Event device

The drugs, medical devices and immune cells used in cancer treatment are often compared to our military equipment in war, while the viruses or cancer cells that “invade” the human body are the enemy's military equipment.

(2)

其实卵巢癌的维持治疗对于我们二期患者来说，是一把双刃剑

qíshí	*luǎncháoái*	*de*	*wéichí*	*zhìliáo*
duìyú	*wǒmēn*	*èrqī*	*huànzhē*	*láishuō*
shì	*yìbǎ*	*shuāngrèn*	*jiàn*	
actually	ovarian.cancer	AUX	maintain-ADJ	treatment
P	I.1PL	second-stage	paitent	COMPL
be	a	double-edged-ADJ	sword	
“Maintenance treatment of ovarian cancer is a double-edged sword for our second-stage patients.”				

In this metaphorical framework, the idea of maintenance treatment becomes a metaphorical battlefield, and the dual-edged sword represents the treatment's inherent complexities. Surgery can bring benefits to the patient, but it may also aggravate the patient's trauma. Just like a weapon, a sword can protect oneself on the battlefield, but if used improperly, it can also accidentally injure oneself.

4.1.3. Event method

Strategy and tactics are crucial for the war, and so is cancer treatment, such as radiotherapy, chemotherapy, surgery, drugs, etc.

(3)

癌症细胞通过降低药物活性而产生抗药性

aízhèng	*xìbāo*	*tōngguò*	*jiàngdī*	*yàowù*
huóxìng	*ér*	*chǎnshēng*	*kàngyàoxìng*	
cancer	cells	through	reduce	drug
activity	PCL	become	resistant-ADJ	

"Cancer cells become resistant by reducing the activity of drugs."

Metaphor：Cancer development/Cancer is war
Drug are weapons

In the war, resisting enemy attacks and reducing the activity of enemy weapons is a common strategy. Here, the drug resistance of cancer cells is metaphorically referred to as a behavior of resisting enemy (drug) attacks.

4.1.4. Event preparation

Corresponding preparations need to be made before war and cancer treatment.

(4)

手术前做了增强 CT 来侦查病灶的范围

shǒushùqián	*zuòle*	*zēngqiáng*	*CT*	*lái*
zhēnchá	*bìngzào*	*de*	*fànwéi*	
before.surgery	perform-PASS	enhanced-ADJ	CT	AUX
detect	lesion	AUX	scope	

"Enhanced CT was performed before surgery to detect the scope of the lesion."

Metaphor: Body is container
Disease is fire

This clinical terminology uses a conceptual metaphor rooted in Chinese etymology. The character 灶 (zào), which historically refers to a "cooking stove" - a physical container for fire - recasts the human body as a bounded spatial entity. Specifically, it designates the lesion site as a confined region where pathological processes take place. Within this framework, the implicit symbolism of fire (火，huǒ) tied to 灶 plays two pathological roles: it fuels the metabolic energy that drives abnormal cellular proliferation, while also embodying the destructive force that undermines biological integrity.

This metaphorical structure draws fundamentally from traditional Chinese philosophy, which recognizes fire's ambivalent nature - as an indispensable energy source for survival that turns lethally dangerous when unchecked. It gives clinicians a cognitively relatable model for understanding cancer's paradoxical duality: a metabolically active process that sustains itself even as it threatens the life it inhabits.

4.1.5. Event process

During the cancer treatment process, medical staff and patients “declare war” and “launch war” against cancer cells that threaten human health. On the other hand, cancer cells are also “marching” and “invading” the patient.

(5)

距离上次检查不到三个月的时间,癌细胞突破包膜，入侵了腹腔和淋巴结				
jùlí	*shàngcì*	*jiǎnchá*	*bùdào*	*sāngèyuè*
de	*shíjiān*	*ái*	*xìbāo*	*tūpò*
bāomó	*rùqīnle*	*fùqiāng*	*hé*	*línbājí*
before-ADV	last-ADJ	examination	less.than	three.CLF.month
AUX	time	cancer	cell	break-PST.out.P
capsule	invade-PST	abdominal.cavity	and	lymph.node
“Less than three months before the last examination, the cancer cells broke out of the capsule and invaded the abdominal cavity and lymph nodes.”				

Metaphor: Cancer development is war process

In this sentence, “the cancer cells broke out of the capsule” is connected by contiguity as “enemy forces breaking through a defense line.” The next step is “invaded the abdominal cavity and lymph nodes”; this can be mapped to the concept of “enemy forces invading territories.” These two war metaphors are to describe the progression of cancer and the spread of cancer within the body.

4.1.6. Event result

The outcome on the battlefield is usually only victory or defeat, corresponding to the success or failure of disease treatment or medical research. However, sometimes wars end in reconciliation, just like in cancer treatment; some terminal patients need to live with cancer, which is also a kind of reconciliation with cancer.

(6)

前几天,有个病友在与癌症的斗争中战败了,永远地离开了我们

qiánjǐtiān	*yǒugè*	*bìngyǒu*	*zài*	*yǔáizhèngde*
dòuzhēng	*zhōng*	*zhànbàile*	*yǒngyuǎnde*	*líkāile*
wǒmēn				
few.days.ago-ADV	one.CLF	patient	in.process	with.cancer-ADJ
battle	COMPL	lost-PST	forever-ADV	leave-PST
I-OBJ.1PL				

"A few days ago, a patient lost his battle with cancer and left us forever."

Metaphor: Cancer is war
Treatment is fighting
Patients are warriors

In this metaphorical framework, the struggles against cancer are conceptualized as a war, and the outcome is framed in terms of victory or defeat. The war metaphor allows for a more vivid and emotionally resonant description of the patient's experience.

4.1.7. Event type

War and cancer treatment event types are parallel. War types - total war, local war, protracted war, critical war, and "war without gunpowder" - correspond to cancer treatments: total war mirrors multimodal comprehensive treatment; local war aligns with localized treatments like tumor resection; protracted war matches chronic cancer management; critical war parallels acute treatment phases; and "war without gunpowder" resonates with supportive care (patients frame coping with side effects as an "invisible war"). This metaphorical mapping reflects their diverse natures.

(7)

作为卵巢癌三期的病人，我正在打一场持久战

zuòwéi	*luǎncháoái*	*sānqīde*	*bìngrén*	*wǒ*
zhèngzài	*dǎ*	*yìchǎng*	*chíjiǔ*	*zhàn*
as	ovarian.cancer	stage.III-ADJ	patient	I.1SG
in.process	fight	one.CLE	protracted-ADJ	battle

"As a patient with stage III ovarian cancer, I am fighting a protracted battle."

Metaphor：Cancer treatment is war

In this metaphorical construction, the patient's experience with stage III ovarian cancer is framed as a protracted battle. This metaphor helps convey the survivor's effort and determination in the face of a daunting disease. By associating the process of treating the disease with war, the survivor may be trying to emphasize

the perseverance that a patient needs to have in overcoming the disease, just as a soldier needs perseverance and determination on the battlefield.

4.2. Results: Motivation Analysis of war metaphors

4.2.1. Cognitive motivation

Lakoff and Johnson (1980) noted that "the everyday conceptual systems through which we think and act are inherently metaphorical" - a principle that clarifies why war metaphors take root in cancer discourse. Conceptual metaphors work by drawing on structured knowledge from one domain to make sense of another (Deng et al., 2021), and humans naturally rely on earlier-learned, vivid concepts to frame newer, abstract ones.

War emerges as a key source domain here for specific cognitive reasons. It is a concrete realm with distinct elements: enemies, weapons, strategies, and victories. These map neatly to the abstract experience of cancer: cancer cells as "enemies," treatments as "weapons," medical plans as "strategies," and remission as "victory." This alignment - from the tangible structure of war to the intangible reality of illness - follows the basic cognitive pattern of moving from concrete to abstract, making the war metaphor a logical and effective tool for shaping how patients understand their experience.

4.2.2. Historical and cultural motivations

War metaphors stem from humanity's enduring conflict experience: Keeley (1996) estimates 90–95% of historical groups endured warfare, with over 14,500 wars in 5,000 years (Yu et al., 2002). This legacy embeds war-related metaphors - such as "arguments are war" and "business is war" - as cross-culturally universal frames (Lakoff & Johnson, 1980).

In China, war's cultural impact is especially profound. Dynastic upheavals, anti-imperialist struggles, and 20th-century revolutionary wars (e.g., the Chinese Civil War) entrenched "struggle" as a core narrative (Chen, 2018). Even post-1949, revolutionary discourse framed nation-building as a "war against poverty," normalizing war rhetoric in politics, economics, and public life. This explains the resonance of phrases like "battling cancer," which draw on a cultural lexicon where conflict is a familiar lens for collective challenges.

The 2020 COVID-19 pandemic exemplified this: framing the crisis as a "people's war" (人民战争) mobilized societal action, similar to how war metaphors in cancer narratives foster solidarity (Musolff, 2022). Such examples confirm war discourse remains a cultural default, making it a natural choice for articulating life's battles.

4.2.3. Rhetoric Motivation

Montgomery (1991) argues military metaphors possess unique persuasive power: by situating people in a "fearful yet mobilizing" context, they drive defensive action and emergency response coordination.

For example, during the 2020 COVID-19 pandemic, China's societal response explicitly adopted a "war metaphor" framework. From governmental directives to grassroots mobilization, every phase - from outbreak recognition to containment - was articulated through martial rhetoric (Musolff, 2022; Panzeri et al., 2021). This framing accelerated public awareness, galvanized medical community initiative, and unified societal action, ultimately rallying collective effort to combat the virus. Such rhetoric, as Wicke et al. (2020) observe in pandemic discourse, taps into shared notions of urgency and collective duty, illustrating how war metaphors can function as a strategic rhetorical tool to organize response in public health crises.

4.3. Quantative part

First, the author divided the text source into three cancer stages based on the cancer survivors who posted blogs on Douyin follows the clinical criteria defined by the National Comprehensive Cancer Network (2024):

Early-stage: Localized tumors without metastasis (Stage I–II).

Mid-stage: Regional spread with lymph node involvement (Stage III).

Advanced-stage: Distant metastasis (Stage IV).

This classification aligns with medical standards to ensure consistency in analyzing stage-related metaphor patterns.Statistics on the number and proportion of sentences containing war metaphors in cancer self-reports about other diseases in different stages.

Table 2. Crosstabulation of Sentence Counts by War Metaphor Usage and Stage

*Number of Sentences * Stage Crosstabulation*						
			Stage			Total
			Early	Mid	Advanced	
Number of Sentences	use war metaphor	Count	323	458	352	1133
		% within number of sentences	28.5%	40.4%	31.1%	100.0%
	without war metaphor	Count	3332	4924	2663	10919
		% within number of sentences	30.5%	45.1%	24.4%	100.0%
Total		Count	3655	5382	3015	12052
		% within number of sentences	30.3%	44.7%	25.0%	100.0%

Table 3. Chi - Square Test Results for Sentence Count, War Metaphor, and Stage

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.687[a]	2	.000
Likelihood Ratio	23.680	2	.000
Linear-by-Linear Association	14.066	1	.000
N of Valid Cases	12052		
3. a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 283.44.			
4.			

Results showed 323, 458, and 352 sentences with war metaphors across the three cancer stages, respectively. Their proportions in the overall sample were 28.5% (early), 40.4% (middle, the highest), and 31.1% (late). A chi-square test revealed statistically significant differences in war metaphor use among the stages ($P<0.001$), with middle-stage survivors using more. This may link to the 1–3 years post-diagnosis period - when disease and treatment pressure is greatest - during which patients often use "fighting cancer" metaphors to express their mindset.

Second, differences in war metaphor use by age were explored, with survivors grouped as 20–35, 35–50, and over 50 years old.

Table 4. Crosstabulation of Sentence Counts by War Metaphor Usage and Age

*Number of Sentences * Age Crosstabulation*						
			Age			Total
			20-35 years old	35-50 years	over 50 years old	
Number of Sentences	use war metaphor	Count	643	233	257	1133
		% within number of sentences	56.8%	20.6%	22.7%	100.0%
	without war metaphor	Count	5589	2812	2518	10919
		% within number of sentences	51.2%	25.8%	23.1%	100.0%
Total		Count	6232	3045	2775	12052
		% within number of sentences	51.7%	25.3%	23.0%	100.0%

Table 5. Chi - Square Test Results for Sentence Count, War Metaphor, and Age

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.150[a]	2	.000
Likelihood Ratio	17.652	2	.000
Linear-by-Linear Association	5.452	1	.020
N of Valid Cases	12052		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 260.88.			

The results showed that the 20 - 35 age group had the highest proportion of sentences using war metaphors in describing cancer experiences, at 56.8%; the 35 - 50 and over 50 age groups had the highest proportion of sentences using war metaphors in narratives at 20.6% and 22.7%. The chi - square test ($P < 0.001$) also confirmed differences between diverse age groups. Young patients are more likely to use metaphors such as “fighting the disease” to express their feelings.

Finally, the author compares different genders on the use of war metaphors in cancer patients' self-posted illness experiences.

Table 6. Crosstabulation of Sentence Counts by War Metaphor Usage and Gender

Number of Sentences * *Gender Crosstabulation*					
			Gender		Total
			Male	Female	
Number of Sentences	use war metaphor	Count	338	795	1133
	Count	% within number of sentences	29.8%	70.1%	100%
	without war metaphor	Count	3573	7346	10919
	Count	% within number of sentences	32.7%	67.2%	100%
Total		Count	3911	8141	12052
		% within number of sentences	32.4%	67.5%	100%

Table 7. Chi - Square Test Results for Sentence Count, War Metaphor, and Gender

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Precise Significane (2-sided)	Precise Significane (1-sided)
Pearson Chi-Square	3.912[a]	1	.048		
The Correction of Continuity[b]	3.782	1	.052		
Likelihood Ratio	3.964	1	.046		
Fisher’s Exact test				0.50	0.26
Linear-by-Linear Association	3.912	1	.048		
N of Valid Cases	12052	1			
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 367.67.					
b.Calculation only for 2x2 table					

Through the chi-square test ($p>0.05$), we can know that there is no significant difference in the frequency of war metaphors used by cancer patients of different genders in their posts of illness narratives.

5. Discussion

The findings regarding the use of war metaphors in cancer narratives among different age groups and cancer stages carry far - reaching implications, especially when considering patients' coping mechanisms and public health communication in the context of China.

5.1. Coping Mechanisms

5.1.1. Age - related Coping Styles

Young Patients' Active Resistance: War metaphors are significantly more prevalent among 20–35-year-old cancer patients, tied to their life perspectives. As Arnett (2000) noted, emerging adults see life as a journey of self-exploration and active pursuit; cancer disrupts this path. Using metaphors like "fighting the disease" helps them regain control and agency. For example, young adult-dominated online cancer support groups feature frequent references to "battling" cancer, expressing determination and fostering connection among "fighters."

Older Patients' Acceptance-based Coping: Older patients, with more life experience, tend toward acceptance (Carstensen, 1992). Their lower use of war metaphors reflects a reconciled attitude, viewing cancer as an inevitable life challenge with less confrontational language. In interviews, elderly patients often describe their illness matter-of-factly, focusing on adapting to changes rather than framing it as a "battle".

5.1.2. Survival Rates and Psychological Coping

Young Patients' Perceived Vulnerability: Younger cancer patients may perceive lower survival chances in certain cancer types (Siegel et al., 2023). This vulnerability intensifies their need to "fight," shown via war metaphors. In aggressive cancers like some leukemias, young patients often feel an urgent need for a "battle" against the disease. Their war-like language acts as a psychological defense, helping them face cancer more bravely.

Older Patients' Long-term Management Outlook: Older patients, however, may have more palliative or long-term management survival goals. This goal difference reduces their use of confrontational language. They focus more on maintaining quality of life during treatment, lacking the pressure to "defeat" cancer quickly and aggressively. For instance, older patients with chronic cancer may prioritize symptom-managing treatment plans over seeking complete "victory."

5.2. Public Health Communication in China

5.2.1. Positive Motivational Aspect

Mobilizing the Public: In China, war metaphors in cancer discourse can be highly motivational. Phrases like "fighting cancer" can mobilize the public, similar to the way the "people's war" metaphor during the COVID - 19 pandemic rallied the nation (Musolff, 2022). They create a strong sense of unity and determination. Cancer awareness campaigns that use war - like language, such as "launching an offensive against cancer," can attract more public attention and resources. The "battle" concept resonates well with the Chinese cultural value of perseverance in the face of adversity. For example, large - scale cancer charity runs often use the slogan "running to defeat cancer," which not only promotes physical activity but also symbolizes the collective effort to fight against the disease.

5.2.2. Potential Negative Psychological Impact

Imposing Unnecessary Pressure: War metaphors, however, have drawbacks. Research shows they may imply patients failing to "win" are at fault (Semino, 2016). In China's context of strong family expectations and social support, patients may feel extra pressure to "defeat" cancer. Disease progression could trigger guilt or failure, as if letting families down.

Stigmatizing Palliative Care: War metaphors can also stigmatize palliative care. Studies (e.g., CSUSB ScholarWorks, 2019) note that exposure to cancer narratives with war language increases negative stereotypes of patients choosing palliative care. In China, where palliative care is poorly understood and accepted, such metaphors may reinforce the view that it equals "giving up", deterring patients from accessing this vital care.

5.2.3. Adapting Communication Strategies

Diversifying Metaphors: Based on these findings, Chinese public health communicators should refine their language use, considering metaphor combinations. For instance, journey metaphors – common among cancer patients (Semino, 2016) – can highlight the experience's long-term, fluctuating nature without war metaphors' harsh victory/defeat implications. Campaigns might use slogans like "embarking on a cancer-fighting journey together" to soften combative tones.

Tailoring Messages: Understanding age and cancer stage differences in metaphor use enables targeted communication. For younger patients, messages could reinforce agency and resilience, e.g., highlighting young survivors who "fought bravely." For older patients, accepting, supportive language focusing on disease management and quality of life may be better - brochures might use "adapting to life with cancer" over "fighting to the end."

In conclusion, war metaphors in Chinese cancer narratives reflect complex

coping mechanisms and inform public health communication. Further research should explore translating these insights into effective support/communication strategies, accounting for China's unique cultural, social, and psychological factors.

6. Conclusion

This study explored war metaphors in Chinese cancer survivors' Douyin narratives and their variations across cancer stages, age groups, and genders. Findings show war metaphors act as a structured cognitive and communicative tool, mapping war elements (e.g., combatants, strategies) onto cancer treatment experiences (e.g., medical teams, survival efforts) via Frame Semantics (Fillmore, 1982, 2006) and Conceptual Metaphor Theory (Lakoff & Johnson, 1980).

Quantitatively, significant differences emerged by cancer stage and age: middle-stage patients (40.4%) and younger patients (20–35 years, 56.8%) used war metaphors most, with no notable gender impact. These align with the study's aims, reflecting treatment intensity and life-course perspectives (e.g., young adults' focus on agency; Arnett, 2000).

Implications are multifaceted. Cognitively, war metaphors bridge concrete (war) and abstract (cancer) experiences, aiding sense-making (Kövecses, 2010). Culturally, their prevalence mirrors China's "struggle" narrative (Chen, 2018) and normalized war rhetoric in public discourse, as in pandemic responses (Musolff, 2022). Practically, variations by stage and age highlight the need for tailored communication - e.g., integrating journey metaphors to complement war frames and reduce palliative care stigma (Semino, 2017).

Limitations, like underrepresenting non-Douyin users, suggest future research should include diverse populations and explore metaphor use's links to mental health. Overall, this study enhances understanding of how metaphor shapes digital illness narratives, offering insights into patient coping and culturally responsive health communication.

References

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist,* 55(5), 469–480. https://doi.org/10.1037/0003-066X.55.5.469

Benczes, R. (2020). *Metaphor in corpus linguistics.* Edinburgh: Edinburgh University Press.

Chen, X. (2018). Revolutionary discourse and cultural memory in modern China. *Journal of Contemporary China,* 27(110), 189–205. https://doi.org/10.1080/10670564.2017.1396778

Degner, L. F., Hack, T., O'Neil, J., & Kristjanson, L. J. (2003). A new approach to eliciting meaning in the context of breast cancer. *Cancer Nursing,* 26(3), 169–178. https://doi.org/10.1097/00002820-200306000-00001

Deng, Y., Yang, J., & Wan, W. (2021). Embodied metaphor in communication about lived experiences of the COVID-19 pandemic in Wuhan, China. *PLOS One,* 16(12), e0261968. https://doi.org/10.1371/journal.pone.0261968

Fillmore, C. J. (1975, September). An alternative to checklist theories of meaning. In *Annual Meeting of the Berkeley Linguistics Society* (Vol. 1, pp. 123–131). Berkeley: Berkeley Linguistics Society.

Fillmore, C. J. (1982). Frame semantics. In *Linguistics in the morning calm* (pp. 111–138). Seoul: Hanshin Publishing Co.

Fillmore, C. J. (2006). Frame semantics. In *Cognitive linguistics: Basic readings* (pp. 373–400). Berlin: Mouton de Gruyter.

Gibbs, R. W., & Franks, B. (2002). Metaphor in everyday life: A study of cancer patients' figurative language. *Metaphor and Symbol,* 17(1), 1–20. https://doi.org/10.1207/S15327868MS1701_1

Keeley, L. (1996). *War before civilization.* Oxford: Oxford University Press.

Keeley, L. H. (1996). *War before civilization: The myth of the peaceful savage.* Oxford: Oxford University Press.

Kövecses, Z. (2010). *Metaphor: A practical introduction* (2nd ed.). Oxford: Oxford University Press.

Lakoff, G. (1991). *Metaphors and war: The metaphor system used to justify war in the Gulf*. Berkeley: University of California, Berkeley.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: University of Chicago Press.

Montgomery, S. L. (1991). Codes and combat in biomedical discourse. *Science as Culture,* 2(3), 341–390. https://doi.org/10.1080/09505439109360214

Montgomery, C. (1991). *The grammar of war: The language of military persuasion.* Westport, Connecticut: Greenwood Publishing Group.

Mohd Jamil, N. S. Z., Benczes, R., & Semino, E. (2022). Multimodal metaphors in online cancer narratives: A case study of Instagram posts. *Journal of Pragmatics,* 196, 115–129. https://doi.org/10.1016/j.pragma.2022.05.007

Musolff, A. (2022). War against Covid-19: Is the pandemic management as war metaphor helpful or hurtful? In *Pandemic and Crisis Discourse: Communicating COVID-19 and Public Health Strategy* (pp. 307–324). Oxford: Routledge.

National Comprehensive Cancer Network. (2024). *Cancer staging and disease progression framework.*

Panzeri, F., Di Paola, S., & Domaneschi, F. (2021). Does the COVID-19 war metaphor influence reasoning? *PloS One,* 16(4), e0250561.

Pinker, S. (2010). The cognitive niche: Coevolution of intelligence, sociality, and language. *Proceedings of the National Academy of Sciences of the United States of America,* 107(29), 8993–8999. https://doi.org/10.1073/pnas.0914630107

Semino, E. (2016). *Metaphor, cancer and the end of life: A corpus-based study.* Oxford: Routledge.

Semino, E., Heywood, S., & Short, M. (2006). *Metaphors in health, illness and dying.* London: Palgrave Macmillan.

Siegel, R. L., Miller, K. D., Wagle, N. S., & Jemal, A. (2023). Cancer statistics, 2023. *CA: A Cancer Journal for Clinicians,* 73(1), 17–48. https://doi.org/10.3322/caac.21763

Sontag, S. (1978). *Illness as metaphor.* New York: Farrar, Straus and Giroux.

Warren, V. (1991). The "Medicine is war" metaphor. *HEC Forum,* 3(1), 39–50. https://doi.org/10.1007/BF02353718

Wicke, P., & Bolognesi, M. M. (2020). Framing COVID-19: How we conceptualize and discuss the pandemic on Twitter. *PloS One,* 15(9), e0240010.

Yu, J., et al. (2002). *Wars that shaped history.* Shanghai: Wenhui Publishing House.