



# Metaphors in blogs posted by Chinese lung cancer survivors

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## ABSTRACT

Metaphors play a crucial part in human cognition and significantly enhance doctor-patient communication. However, metaphor uses of Chinese lung cancer survivors are still understudied. The aim of the study was to examine how Chinese lung cancer survivors employed metaphors to describe their illness experiences using the method of inductive content analysis. The data analyzed in this study were derived from 15 blogs written by lung cancer survivors and posted on the social media site Xiaohongshu, totaling 204,395 characters. Through the analysis, 1762 metaphor phrases were identified. Five themes emerged: journey metaphor, violence metaphor, burden metaphor, building metaphor, and imprisonment metaphor. The identified metaphors enabled lung cancer survivors to emphasize different aspects of their illness experiences. Consequently, it is imperative for healthcare professionals to pay close attention to the metaphors employed by patients, as they have the potential to shape their understanding of the illness. By recognizing and engaging with these metaphors, healthcare professionals can gain deeper insights into the unique perspectives of Chinese lung cancer survivors, thus facilitating more effective communication and empathetic care.

## 1. Introduction

Lung cancer is one of the most frequently diagnosed cancer in China [1]. Due to the advances in cancer diagnosis and treatment, lung cancer is no longer the “death sentence” [2]. Instead, lung cancer survivors tend to have a longer survivorship after their diagnosis [2]. However, the experiences of living with lung cancer can be both physically and psychologically frustrating. Specifically, lung cancer survivors often suffer from symptom burden, emotional breakdown, and communication problems, which lead to a low quality of life [3,4]. As the experiences of lung cancer survivors become increasingly complex [5], there is a need for enhanced understanding of their experiences.

Living with cancer can undoubtedly pose a tremendous challenge, but writing provides a powerful coping mechanism for cancer survivors [6], enabling them to navigate meaning in their illness experiences. An intriguing aspect of this phenomenon is the frequent use of metaphors by these individuals to frame their perceptions of cancer [7]. According to Lakoff and Johnson [8], metaphor is not just a rhetorical device, but rather it reflects the way we perceive and understand the world. Metaphors, deeply rooted in our embodied experiences and physical interaction with the world, often originated from universal human encounters such as natural phenomena and emotions [8]. Remarkably, the presence of overlapping metaphors across diverse languages and cultures further underscores their significance and impact [9]. Our conceptual system is grounded in the sensory and motor experiences that provide the foundation for

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metaphorical mappings, enabling us to understand the abstract concepts in terms of more concrete experiences [9]. For instance, cancer survivors' referring to living with lung cancer as a journey relies on the sense of spatial movement, which allows them to attribute the features of journey to the experiences of living with lung cancer. Such metaphor uses benefit cancer survivors in multiple ways. Specifically, they enable cancer survivors to concretely contemplate abstract and sensitive concepts and emotions, provide a linguistic tool for expressing meaningless suffering, and present a strategy for individual growth in managing illness [10–13].

A body of research has focused on metaphors in cancer-related health communication within Western context. For instance, two studies reviewed the strengths and limitations of journey and military metaphors in cancer discourse and discussed how physicians created a common language according to patients' metaphors [14,15]. Additionally, there have been empirical and experimental studies investigating metaphors used by both cancer patients and the public [16–21]. As for non-Western contexts like China, researchers examined various types of disease metaphors used in doctor-patient communication, emphasizing the importance of their proper use and the inevitability of metaphorization of disease [22,23]. However, studies exclusively centered on metaphors in cancer discourse remain limited in China.

The advent of the Internet has enormously increased the number of blogs describing personal experiences of living with cancer and other life-limiting diseases [24]. These blogs serve as unique platforms for exploring how cancer survivors communicate and make sense of their illness experiences. Several studies have drawn on blogs to examine the metaphors that cancer patients used in making sense of their illness experiences. These studies revealed that violence and journey metaphors were most frequently used in cancer patients' blogs [25–30]. The two types of metaphors were considered as opposite ways of conceptualizing the illness experiences: violence metaphor conveyed aggression, while journey metaphor was associated with peacefulness [15]. Research has suggested that journey metaphor was a better alternative to violence metaphor in policy documents. This was because journey metaphor portrayed cancer as a companion along the way, while violence metaphor might mistakenly imply that cancer held more power than it actually did, leaving patients feeling isolated [15,31,32]. However, research has also indicated that violence and journey metaphor could be used in both empowering and disempowering ways [25,30]. In addition to journey and violence metaphors, cancer patients also employed other types of metaphors, such as imprisonment, burden, and unveiling, but less frequently [26,28,29].

The prior studies on metaphors in cancer survivors' blogs were limited to Western context. Attention needs to be paid to how metaphors are used in different languages and cultures in that metaphors are culture-bounded [8]. To the best of our knowledge, there is no study exclusively exploring metaphor uses of lung cancer survivors. Furthermore, prior research mainly focused on metaphor uses of health professionals [33], while patients' metaphor uses were less examined. To the best of our knowledge, the metaphors used by Chinese lung cancer survivors are still understudied. Thus, the aim of the study was to examine (1) what metaphors Chinese lung cancer survivors used in their online blogs, and (2) how they used these metaphors to frame their illness experiences.

## 2. Methods

### 2.1. Study design

The study adopted a qualitative descriptive approach to examine how Chinese lung cancer survivors framed their illness experiences through metaphors. Qualitative descriptive studies provide a comprehensive understanding of an event, as they allow for a closer examination of the naturalistic data [34]. The study was reported in accordance with Consolidated Criteria for Reporting Qualitative Research (COREQ) [35].

## 3. Data collection

The data were collected from Xiaohongshu, a popular Chinese social media site similar to MicroBlog. Lung cancer survivors who

**Table 1**  
Participants' demographics.

Participant	Gender	Age at diagnosis	Stage of lung cancer	Number of blogs	Number of words	Number of metaphors
P1	Female	52	Stage IV	21	3064	57
P2	Female	31	Stage IV	34	8336	116
P3	Female	32	Stage IV	27	4576	30
P4	Female	26		20	6074	51
P5	Female	31	Stage II	29	5608	58
P6	Female	31	Stage IV	16	5520	74
P7	Female	15		31	10,455	113
P8	Female	36	Stage IV	74	22,965	253
P9	Female	31	Stage IV	102	33,806	194
P10	Female	54	Stage I	55	25,988	161
P11	Female	37	Stage III	39	15,996	81
P12	Male	30	Stage IV	27	4993	104
P13	Female	30		83	26,705	287
P14	Female	36		24	11,948	78
P15	Female	35	Stage I	61	18,361	105
Total				643	204,395	1762

posted on this site were the focus of this study. The researcher searched for relevant blogs written by lung cancer survivors using the key words “lung cancer” and “anticancer diary”. The blogs were included if they met the following criteria: the blogs were written by Chinese lung cancer survivors and related to their experiences of living with lung cancer, and lung cancer survivors received treatment in China and posted no fewer than 10 blog entries.

Overall, fifteen lung cancer survivors were included in the study, with their demographics shown in Table 1. The study included 14 females and one male, and their age ranged from 15 to 54 years at diagnosis. Most of them were diagnosed with terminal lung cancer. They wrote 643 blog entries between August 27, 2019 and December 30, 2022, totaling 204,395 characters with a mean length of approximately 317.9 characters.

All videos, pictures, and comments of the blog entries were excluded. The eligible blogs were copied verbatim into Microsoft Word and were compared with those on Xiaohongshu three times to ensure consistency. The blogs were then imported into the qualitative analysis software NVivo 12 after word segmentation.

#### 4. Ethical considerations

Blog is a public practice of writing for an implicit audience [36]. Thus, situated in the public media site, blogs are exempt from consent from bloggers [36]. In a similar vein, Bruckman [37] suggested that consent from bloggers is not necessary if (1) the online information is publicly accessible, (2) the use of online information is not prohibited by site policy, and (3) the topic of the information is not highly sensitive. Since Xiaohongshu is a public social media site and blogs are not protected by password, the consent is not necessary from bloggers. However, we replaced bloggers’ usernames with number to protect their privacy. Additionally, all the identifying information was removed (“P” for lung cancer survivors in the study).

##### 4.1. Data analysis

The data were analyzed following the procedures of qualitative content analysis proposed by Graneheim and Lundman [38]. Moreover, Corpus Word Parser and NVivo 12 software were adopted to help analyze and organize the data. Researchers read the data three times to establish familiarity before applying Corpus Word Parser for word segmentation. We drew on the well-established Metaphor Identification Procedure to identify metaphorical expressions [39]. The study focused on metaphors that mirrored survivors’ perspectives on lung cancer and feelings of living with the disease, and their encouragement and advice to other lung cancer survivors. The identified metaphorical phrases were grouped into subthemes or themes. In cases where disagreements occurred, they were addressed by discussion with the assistance of an analytic memo. If a consensus could not be reached, another researcher would be invited to participate in the discussion until an agreement was reached.

##### 4.2. Trustworthiness

We adhered to the recommended guidelines of credibility, dependability, and transferability to establish the trustworthiness of the study [38]. We implemented a detailed data collection and analysis process to ensure credibility. The researchers reviewed and discussed the metaphorical expressions, subthemes, and themes many times, addressing any disagreement through discussion. In addition, researchers also held regular meetings and wrote analytical memos during data collection and analysis process to ensure consistency throughout the study. We provided detailed characteristics of the lung cancer survivors and their blogs as well as a comprehensive presentation of the findings, which facilitated the transferability of the study.

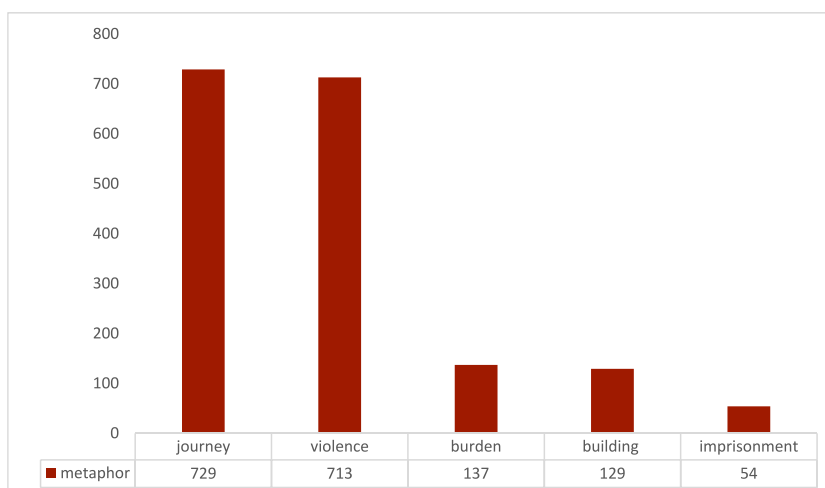


Fig. 1. Metaphor uses related to lung cancer experiences in the blogs.

4.3. Findings

Our dataset yielded 1762 metaphorical phrases categorized into five themes: (1) journey metaphor, which was related to spatial movement, such as path, come, and go through; (2) violence metaphor, which was related to war and monster, such as fight, enemy, and demon; (3) burden metaphor, which was weight-related expressions, such as burden, heavy, and carry; (4) building metaphor, which was related to construction and architecture, such as stable, support, and collapse; and (5) imprisonment metaphor, which was related to the limitation of freedom, such as free, get stuck, and sentence. Of these metaphors, journey and violence metaphors were most frequently used by lung cancer survivors, while burden, building, and imprisonment metaphors were less prevalent in their blogs (see Fig. 1). As shown by Fig. 2, eight lung cancer survivors were inclined to frame their experiences with journey metaphor, while the rest preferred violence metaphor. Other types of metaphors were less pervasive in their blogs.

The themes and subthemes were shown in Table 2 and presented in detail with examples in the following section.

4.3.1. Journey metaphor

Journey metaphor was found to be most commonly used among lung cancer survivors in their blogs, describing their illness

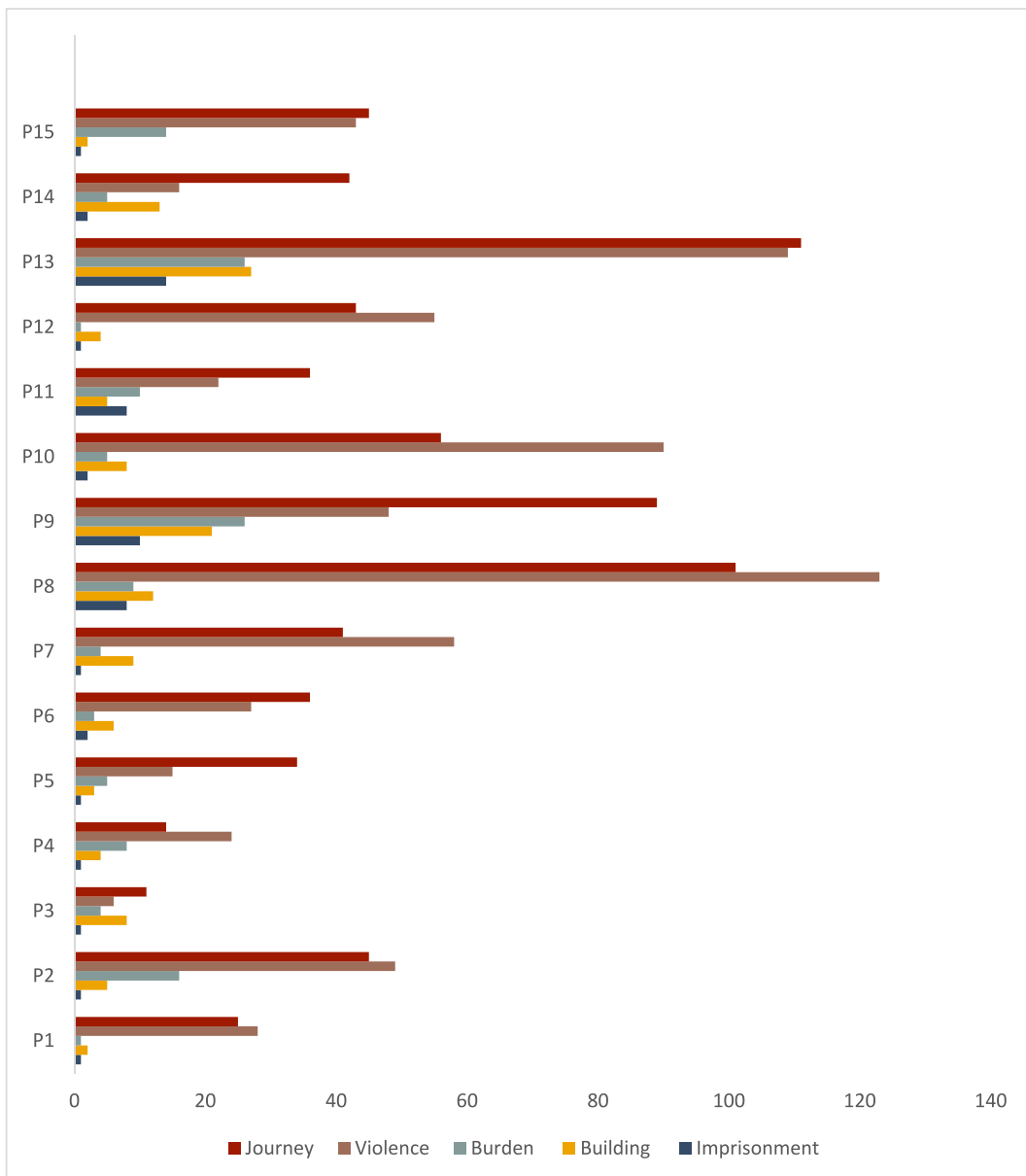


Fig. 2. Individuals' metaphor uses.

experiences as a spatial movement towards recovery. Expressions from the domain of journey, such as come, route, path, move ahead, and go through, were frequently utilized to metaphorically formulated survivors' illness experiences. The theme elaborated on how Chinese lung cancer survivors used journey metaphor to recount their experiences of living with lung cancer, provide advice and encouragement to other cancer survivors, and describe personal growth in the journey.

Survivors viewed living with lung cancer as a journey which began with diagnosis and ended with recovery. As many survivors commented, lung cancer came unexpectedly and exerted enormous impact on their lives. Initially, many survivors adopted a denial attitude towards their diagnosis as demonstrated in the following example, where the survivor applied the expression "come" from the domain of journey to describe the unexpected diagnosis of lung cancer:

P2:不知道为什么一切都好好, 癌症就降临我身上了。这么措手不及, 没法接受。[I don't know why everything is fine, but the lung cancer comes upon on me. It's too sudden to accept.]

In the journey, the majority of survivors took the chemotherapy route to treat cancer. Unfortunately, the treatment often resulted in a wide range of side effects, causing overwhelming pain to survivors. As the survivor shared, she believed that chemotherapy was a route she had to take:

P9:绕了一大圈, 还是走了化疗的路。[After a long roundabout, I still ended up taking the chemotherapy route.]

Lung cancer survivors often encountered setbacks and frustrations in the journey, such as illness deterioration, the death of their fellow survivors, and negative emotions. For instance, the survivor in the following example described the uncertainty she faced throughout the treatment:

P6:这两天很丧, 很难调整成女战士模式, 不知道什么时候是个头, 不知道还要经历什么。[These days I feel frustrated and can't act as a woman warrior. I don't know when the treatment ends and what I will go through.]

Survivors were often faced with various challenges along the journey. Therefore, having a support system for companionship and encouragement was indispensable. Support could come from various sources, such as family, friends, fellow survivors on Xiaohongshu, or even their pet. These sources minimized survivors' feelings of isolation and fear, and provided them courage and strength to keep fighting in the journey. For example, a survivor described fighting lung cancer as a path, where her pet always accompanied her so that she would not feel lonely:

P1:在抗癌路上, 肉包陪着不寂寞! [In the anticancer path, I don't feel lonely because Roubao (her pet cat) always accompanies me!]

Blog writing offered survivors an opportunity to express their emotions and seek solace. This form of self-expression allowed survivors to find comfort and encouragement along the journey, thus reinforcing positive emotions such as being hopeful for the future. As shown in the following example, the survivor shared her determination to move forward in the journey:

P4:但这次我还是会抱着希望前行啦! [But this time I will still move ahead with hope!]

Living with lung cancer was an arduous journey, however, it also offered an opportunity for survivors to stop and reflect on the meaning of their life. They would change their attitude towards life, focus on self-improvement, and prioritize spending time with their families. In this regard, lung cancer also facilitated personal growth. In the following example, the survivor expressed her desire to "go through" everyday happily in the rest of the journey:

P15:也许30多岁就发生癌, 这个事情有它存在的正面意义, 让我放松地过着每一天。[I'm diagnosed with cancer at thirties, which may also have positive impact on my life. The cancer makes me go through everyday relaxingly.]

#### 4.3.2. Violence metaphor

Like journey metaphor, violence metaphor was also prevalent in the blogs. In total, we identified 713 metaphorical phrases related to violence in describing survivors' illness experiences. In our study, violence metaphor mainly referred to expressions from the domain of monster and war. Two subthemes were produced: lung cancer as a monster/demon and lung cancer as an enemy.

**Table 2**  
Theme and subthemes.

Themes	Subthemes
Journey metaphor	
Violence metaphor	Lung cancer as a monster/demon Lung cancer as an enemy
Burden metaphor	Physical burden Psychological burden Financial burden
Building metaphor	
Imprisonment metaphor	

#### 4.3.3. Lung cancer as a monster/demon

Lung cancer survivors would draw on certain expressions, such as fight, monster, and demon, to delineate lung cancer as a monster or demon.

The survivors fought the monster or demon, yet they had to endure its side effects. As demonstrated in the following two examples, lung cancer was regarded as a monster or demon living in the body of survivors, causing physical distress to them:

P5:今天住院开始打身体里残余的小怪兽啦！[Today, I'm in hospital and begin to fight the monster in my body!]

P14:希望病魔大人让我明天不要喘的那么厉害了。[I hope the demon of illness won't make me wheeze so badly tomorrow.]

Sometimes the pain became so intense that some survivors would consider surrendering to the demon. Nevertheless, most survivors persisted in the struggle with the demon, motivating themselves to fight and not to give up. In the following example, lung cancer was described as a horrible demon that the survivor continued to confront:

P15:病魔虽然可怕，疼痛虽然可怕，但是请我自己记住今天健儿们的这种精神，永不放弃！[Although the demon and pain are horrible, please remember the spirit of these athletes — never give up!]

#### 4.3.4. Lung cancer as an enemy

Lung cancer survivors often employed expressions from the domain of war, such as weapon, rival, defeat, victory, and warrior, to portray lung cancer as an enemy and describe their battle against the disease.

To conquer lung cancer, survivors armed themselves with a range of weapons, such as treatment, healthy lifestyles, encouragement, and hope, which boosted their morale in battling against the disease. In one example, hope was found to be the most powerful weapon against the cancer:

P12:可是后来我才发现，希望才是我们肿瘤患者最强大的武器。[But then I realized that hope is our most powerful weapon.]

The battle with lung cancer was a difficult experience, where survivors often encountered setbacks, for example, the torment of side effects, illness deterioration, and the influence of covid-19. These setbacks often caused both physical and mental distress to these survivors. In the following example, lung cancer was described as an enemy that the survivor did not defeat:

P2:但我的对手太强大，我并没有打败它，它最近却越来越活跃，带来一个又一个的坏消息。[But my rival is too strong, I don't defeat it. Instead, it becomes more and more active recently, bringing one bad news after another.]

Although the battle was fraught with difficulties, survivors still maintained an active attitude towards fighting lung cancer. More specifically, a number of survivors portrayed themselves as warriors. Such framing could be empowering and allowed them to express their confidence in defeating the disease in the war, as shown in the following example:

P7:抗癌斗士要早点睡准备战斗！[I, an anticancer warrior, need to go to bed early and prepare myself for the battle!]

In addition, when survivors were in better physical condition after treatment, they would feel more confident in defeating the disease. In the following example, the survivor reported that she would win the battle with lung cancer:

P5:离胜利又近了一步。[I'm closer to the victory.]

During the battle with lung cancer, survivors and their peers on Xiaohongshu formed a supportive alliance. They shared their experiences and offered advice, providing valuable insights into treatment options and lifestyle changes. As demonstrated in the following example, the survivor also described her fellow survivors on Xiaohongshu as warriors. They banded together to fight lung cancer:

P7:但过去这段小红书的时间认识了很多和我一样的抗癌斗士，大家谈谈家常、谈谈大家如何治疗、如何调理我们心理上的问题。[In the past several months, I got to know many anticancer warriors on Xiaohongshu. We often talked about domestic trivia, and shared how to treat our disease and dealt with our psychological problems.]

#### 4.3.5. Burden metaphor

We identified 137 metaphor phrases related to burden, which were primarily used in a negative way. Lung cancer survivors drew on weight-related expressions, such as carry, bear, burden, and heavy, to frame their illness experiences. The theme elaborated on the burden that cancer survivors carried. Three subthemes were generated: physical burden, psychological burden, and financial burden.

#### 4.3.6. Physical burden

Lung cancer survivors often carried heavy physical burden due to the side effects of treatment, such as itching, pain, dizziness, and hepatic failure, which decreased survivors' functional status. In the following example, using the expression from the domain of burden, the survivor described the side effects as something she had to bear:

P2:这一年干的最多的事就是去医院，打针，抽血，做各种检查，承受着药物带来的各种副作用，我吃不下饭，恶心，呕吐，虚弱，全身瘙痒。[During this year, what I did most was to go to the hospital, get injections, draw blood for various tests, and bear all kinds of side effects brought by drugs. I suffered from loss of appetite, nausea, vomiting, weakness, and itching.]

To alleviate the physical burden resulted from side effects, survivors would take regular and moderate exercise. In the following example, the survivor suggested taking moderate exercise and regarded inappropriate exercise as a burden on the body:

P13:而且我放疗期间都会适当锻炼,一定要根据自己的身体情况,不要过量给身体增加负担。[What's more, during my radiotherapy, I take moderate exercise according to my physical condition. I don't want to increase burden to my body.]

#### 4.4. Psychological burden

Lung cancer survivors were usually subject to heavy psychological burden when they experienced pain as they worried that metastasis and relapse would occur as indicated in the following example, the survivor considered pain as a psychological burden she had to carry:

P8:每次痛都会有心理负担,担心转移担心复发。[Every time I experience pain, I would carry psychological burden, because I'm always worried about cancer relapse and metastasis.]

Additionally, survivors would feel pressured when their peers died of lung cancer. In the following example, the death of a fellow survivor brought a heavy pressure on the survivor:

P3:我不理解为什么都一模一样的病,她那么快就不在了。她的事让我有了重重的危机感。[I don't understand why we have the same cancer, but she (a lung cancer survivor) dies so quickly. It makes me have a heavy sense of crisis.]

Many survivors considered themselves as a burden on their families. They were reluctant to encumber their families, thus, they often conceal their negative emotions for fear of causing more psychological burden to their families. In the following example, the survivor portrayed her anxiety as a burden on her family:

P4:确诊后其实很焦虑,但在家人面前不能表现出来,怕给他们造成更大的心理负担。[Actually, I was very anxious after the diagnosis of lung cancer, but I didn't tell my families because I didn't want to put more psychological burden on them.]

##### 4.4.1. Financial burden

Lung cancer survivors were faced with heavy financial pressure due to the enormous costs of treatment. Several survivors even could not afford certain treatment modalities and they had to choose other cheaper treatment modalities. As the survivor stated, the high cost of immunotherapy was such a heavy burden on her that she had to choose a cheaper treatment modality:

P13:三年前免疫疗法刚出来,我没有用,费用太高,我承担不起,就选择了观察,定期复查。[The immunotherapy was applied three years ago, but I don't receive immunotherapy because I can't bear the high costs. Instead, I choose regular physical check-ups.]

Some survivors were even in debt due to the huge cost of treatment, which often made them anxious. In the following example, debts were regarded as a burden on the survivor:

P9:花了十几万背债了,咋办?[The treatment has cost over a hundred thousand yuan and I'm saddled with debts. What can I do?]

As survivors had to give up their jobs after the diagnosis of lung cancer, the financial burden all fell on their families. Thus, when survivors were in better physical condition, they were willing to do part-time jobs to help decrease the financial burden on their families. In the following example, the survivor considered the high cost of treatment as a heavy burden on her husband:

P2:我对对象挣的远远不够我花的,想给自己挣点药钱,替我对象分担一点。[The treatment costs too much and my husband doesn't make enough money. I want to make money for my treatment to decrease the burden on my husband.]

##### 4.4.2. Building metaphor

Compared with journey and violence metaphors, building metaphor was used less frequently. We identified 129 metaphorical phrases related to the domain of architecture and construction, such as support, collapse, and stable.

Many survivors considered themselves as a building that needed both physical and psychological support. In the following example, the survivor was described as a building that needed support from her family:

P7:其实我之前的疗程的确很辛苦,没有妈妈的支持,我想我应该挨不过。[Actually, my prior treatment is very tough. I think I wouldn't make it without my mum's support.]

Lung cancer survivors would experience emotional breakdown due to the diagnosis of lung cancer, illness deterioration, side effects of treatment, and lack of company. In the following example, the survivor was considered as a collapsed building after hearing the bad news:

P3:当时医生也没有背着我说,第一时间听到还是蛮崩溃的,反正哭了好久。[The doctor directly told me that I had lung cancer. When I heard the news, I felt collapsed and cried for a long time.]

In some cases, survivors regarded the tumor as a building. They felt satisfied when the tumor remained stable after treatment. As

shown in the following example, the survivor viewed the tumor as a building that stayed stable after the treatment:

P6:虽然肺部的保持稳定没有继续缩小,但是肝脏的转移灶也有减小和缩小,简直太开心啦! [Although the lung tumor stays stable and doesn't shrink, the liver metastasis tumor indeed shrinks. I feel so happy!]

#### 4.4.3. Imprisonment metaphor

We identified 54 metaphorical phrases related to imprisonment. Lung cancer survivors would employ expressions related to the domain of imprisonment, such as sentence, torture, free, and release, to communicate their illness experiences.

When survivors were diagnosed with lung cancer, they delineated the diagnosis as a prison sentence. They were sentenced to several months or years to live by physicians. Despite the depressing fact, survivors could still maintain a positive attitude. They believed that lung cancer was not a "death sentence" and they could struggle to live longer. In the following example, the diagnosis of cancer was described as a sentence:

P8:从确诊晚期,被判只有半年活头,到现在度过了两年多。 [I was sentenced to six months to live when I was diagnosed with terminal cancer. But I have gone through over two years.]

Most survivors deemed that the disease was equivalent to tortures as demonstrated in the following example:

P9:癌症确实是痛死的,可能命中注定我就是受那么多罪。 [Cancer patients indeed die of pain. Maybe I'm doomed to suffer so many tortures.]

Several survivors described hospital as a prison, as indicated in the following example. They were stuck in hospital and could not move freely:

P8:掐指一算,被困在医院22天啦! [Counting on my fingers, I have been stuck in hospital for 22 days!]

Several lung cancer survivors used the expression from imprisonment to convey that they could only get free after they died, as illuminated in the following example:

P9:对于每个癌症病人来说,离开才是真正的解脱。 [For each cancer patient, death is the real release.]

However, lung cancer could have positive impact on survivors because it provided them more free time and an opportunity to slow down. In the following example, the survivor reported that she could arrange her time freely because she did not have to work overtime:

P6:被迫躺平后的生活也还不错,没有了无休止的加班,每天可以自由安排自己的时间。 [Life seems fine after I'm forced to lie flat. I don't have to work overtime, so I can take charge of my time freely.]

## 5. Discussion

To our knowledge, the study first examined the metaphor uses in blogs posted by Chinese lung cancer survivors on Xiaohongshu and highlighted how these survivors made sense of their illness experiences through metaphors. The study identified five prominent types of metaphors associated with lung cancer discourse in China: journey and violence metaphors were most frequently used, whereas burden, building, and imprisonment metaphors were less frequently used. Although all the included survivors used the five types of metaphors, variation in individuals' metaphor uses existed, which might be attributed to the uniqueness of survivors' illness experiences.

Our study demonstrated that the 15 Chinese survivors employed metaphors primarily from five source domains to frame their illness experiences. The consistency could be explained by the fact that cultural factors exerted a significant influence in metaphor uses [8,40]. In addition to the cultural factors, members from the same discourse community were more likely to share communication practice and ways of thinking [41], which further supported the consistency in metaphor uses.

Journey metaphor occurred most frequently in the blogs. Chinese lung cancer survivors described fighting lung cancer as a journey, which enabled them to discuss path, progress, obstacles, and company. The study indicated that lung cancer brought survivors more than suffering, it could also provide survivors an opportunity to reflect on themselves and their goals, thus facilitating a positive change in their attitude towards life. Many researchers and policy makers are in favor of journey metaphor because it is related to peacefulness and reflectiveness, focusing on patients' holistic needs and illness experiences [15,19,31,42]. Nevertheless, the study highlighted that journey metaphor could be used in an empowering or disempowering way, which was in line with the findings of a previous study [29]. It may be explained by the statement that the use of metaphor depends on many factors, such as culture, communication purpose, and specific context [29,30,43]. Thus, when using and analyzing metaphors, multiple factors should be taken into consideration.

The high frequency of violence metaphor implied that they could be effective in expressing the illness experiences of lung cancer survivors. Interestingly, although violence metaphor was considered masculine and aggressive in cancer discourse [15], female survivors included in our study also tended to use the type of metaphor frequently. Further studies are warranted to find out the reasons. Researchers have suggested the avoidance of violence metaphor as it may lead cancer patients to believe that cancer has greater power than them and impair cancer prevention, treatment, and monitoring [15,17,18,32]. Therefore, for some patients fight and battle may be not the preferred ways to deal with cancer. Our study, however, revealed that violence metaphor was prevalent in survivors' blogs and it was indeed used in an empowering way. For example, survivors regarded themselves as warriors. Such articulation could



enhance their morale in defeating lung cancer. Similarly, previous studies also highlighted the empowering function of violence metaphor used by English-speaking and Spanish-speaking cancer patients [29,30]. The similarity also implied that to some extent, Chinese, English, and Spanish patients might conceptualize cancer in a similar way.

Compared with the aforementioned metaphors, burden, building, and imprisonment metaphors were significantly less prevalent in the blogs, which was consistent with the findings of a prior study that investigated metaphor uses of advanced cancer patients in their online narratives [28]. Different from the prior study, the study reported that lung cancer survivors also used building metaphor to describe their illness experiences, which could be formulated in an enabling or disabling way. In contrast, burden and imprisonment metaphors were mainly used in a disempowering way. It might be explained by the negative nature of the burden and imprisonment.

### 5.1. Strengths and limitations of the study

The study first examined the metaphor uses of Chinese lung cancer survivors in their online blogs and identified five types of metaphors, which could provide valuable insights into survivors' understanding of their illness. In addition, the study also enriched research on cancer discourse in China. Furthermore, the study highlighted the value of online blogs as accessible data resources for research.

The study has limitations. The study included 15 blogs written by Chinese lung cancer survivors who were willing to share their experiences online. The self-selected group could not reflect the metaphor uses of the whole population. On the other hand, the sample included only one male survivor. Although a previous study analyzing metaphors used by Swedish cancer patients reported no significant difference between female and male metaphor uses [28], it is unclear whether the finding can be generalized to Chinese population. Future studies are needed to investigate metaphor uses in diverse contexts and population.

### 5.2. Implications for healthcare practitioners

Understanding the metaphors lung cancer survivors used enabled healthcare practitioners to gain insights into survivors' suffering, emotions, and needs, which could contribute to effective doctor-patient communication, enhanced therapeutic relationship, and patient-centered care [33,44–46]. Our study recommended healthcare practitioners to attend to cancer survivors' metaphors so that they could understand the latent meaning of survivors' experiences. The study demonstrated that lung cancer survivors used metaphors in both positive and negative ways, which highlighted the importance of sensitivity when communicating with them. Thus, it was significant for healthcare practitioners to understand the specific context in which the metaphors were used and to apply metaphors that were favored by survivors. Furthermore, it was crucial to recognize that each individual lung cancer survivor might use the same metaphor in a distinct way. Healthcare practitioners should be conscious of the differences to effectively meet survivors' unique needs, which ultimately contributed to patient-centered care.

## 6. Conclusion

The study examined the metaphor uses in blogs posted by Chinese lung cancer survivors on Xiaohongshu. Five themes emerged: journey metaphor, violence metaphor, burden metaphor, building metaphor, and imprisonment metaphor. Violence and journey metaphors were found to be most prevalent in their online narratives, whereas burden, building, and imprisonment metaphors were less commonly used. The identified metaphors enabled lung cancer survivors to emphasize different aspects of their illness experiences. Healthcare professionals should recognize the significance of the metaphors used by patients, as they can greatly influence their understanding of the illness. Through acknowledging and actively engaging with these metaphors, healthcare professionals can gain invaluable insights into the distinct viewpoints of Chinese lung cancer survivors. Consequently, this facilitates more effective communication and enables the delivery of empathetic care tailored specifically to their needs.

### Author contribution statement

Xin Zhang, Yijin Wu: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

Xin Zhang: Performed the experiments; Wrote the paper.

### Data availability statement

Data will be made available on request.

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## Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests.

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