Research Article

Hessah Shajaan Abaalalaa and Wesam M. A. Ibrahim*

Metaphors of cancer in the Arabic language: An analysis of the use of metaphors in the online narratives of breast cancer patients

Abstract: This study explores the use of metaphors in the narratives of breast cancer patients in online magazine websites in the Arabic language. It aims to find similarities and/or differences between English and Arabic in respect of the metaphorical constructions of cancer experiences. The corpus of the study consists of 13,705 words in 19 narratives in Arabic. We used the metaphor identification procedure of Pragglejaz Group (2007) to detect the metaphors in the corpus. We focused on the role of metaphor in constructing our experience of cancer, and examined which metaphors are more frequent in the construction of the cancer experience. The results of the study revealed that there is a great similarity between Arabic and English in respect of the metaphors used to construct the cancer experience; the patients have framed their cancer situation via *WAR* and/or *JOURNEY* metaphors, with *War* metaphors more frequently used than *Journey* Metaphors. The findings also indicate that the Arabic narratives tended to include a stronger religious framework, constructing cancer as a kind of *Trial by Ordeal* in which one proves one's firm faith through patience and acceptance of fate.

Keywords: metaphor, Arabic language, breast cancer

1 Introduction

> [C]ancer remains a life threatening illness characterised by fear and uncertainty about the future and accompanied by intrusive medical procedures and aversive treatment, pain and fatigue, changes in social roles and relationships and other disruptions. (Stanton et al. 2006, 138)

The World Health Organization (WHO) identifies cancer as the "second leading cause of death globally, [being] responsible for 8.8 million deaths in 2015. Globally, nearly 1 in 6 deaths is due to cancer."[1] Hence, cancer is one of the most significant public health challenges of the twenty-first century.[2] It tends to be conceived of as a *trauma* and a *chronic life-threatening disease* (Galgut 2010, Tritter and Calnan 2002). The WHO country profiles[3] for cancer rates (2020) provide the current rates of the most common types of cancer

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1 https://www.afro.who.int/health-topics/cancer.
2 https://www.wcrf.org/dietandcancer/cancer-trends/data-cancer-frequency-country.
3 https://www.who.int/cancer/country-profiles/en/.

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* Corresponding author: Wesam M. A. Ibrahim, Department of Basic Sciences, Applied College, Princess Nourah Bint Abdulrahman University, Riyadh, Saudi Arabia, e-mail: WMIbrahim@pnu.edu.sa
Hessah Shajaan Abaalalaa: Department of Applied Linguistics, College of Languages, Princess Nourah Bint Abdulrahman University, Riyadh, Saudi Arabia

Table 1: Cancer Country Profiles 2020 for Arab countries

Country	Total population (2019)	Total cancer cases (2018)	Total cancer deaths (2018)	Estimated past and future trends in total cases per year (breast cancer)		
				2012	2018	2040
Algeria	4,30,53,054	53,076	29,453	8,177	11,847	18,713
Bahrain	16,41,164	1,048	603	177	227	480
Egypt	10,03,88,076	1,28,892	85,432	18,660	23,081	40,544
Jordan	1,01,01,697	10,898	5,813	1,237	2,143	3,926
Kuwait	42,07,077	3,582	1,658	314	814	1,869
Lebanon	68,55,709	17,294	8,976	1,934	3,219	4,609
Libya	67,77,453	6,308	3,375	679	753	1,261
Mauritania	45,25,698	2,733	1,933	323	412	827
Oman	49,74,992	3,322	1,681	195	454	975
Saudi Arabia	3,42,68,529	24,485	10,518	2,791	3,629	6,886
South Sudan	1,10,62,114	9,398	7,309	1,114	1,407	2,789
Sudan	4,28,13,237	25,746	17,160	3,439	5,677	11,254
Syrian Arab Republic	1,70,70,132	23,170	14,042	4,140	4,935	11,923
Tunisia	1,16,94,721	15,894	10,092	1,826	2,305	3,294
United Arab Emirates	97,70,526	4,707	2,079	568	1,054	2,993
Yemen	2,91,61,922	13,182	9,085	1,963	2,445	4,935

in all countries. Table 1 lists the cancer rates in the Arab countries,[4] and more particularly the hit rate of breast cancer in 2012 and 2018 as well as the expected hit rate in 2040.

Examining how patients conceive of and talk about their own and others' experience of cancer has gained currency over the last 30 years. Metaphors are found to be used by both "patients and clinicians" when "communicating about grave illness" (Periyakoil 2008, 842). Indeed, metaphors pervade communication between clinicians and cancer patients to the extent that one survey found that oncologists used metaphors in roughly two thirds of their conversations with patients (Casarett et al. 2010). Metaphors are "used to communicate otherwise inexpressible experiences" (Skott 2002, 231), and "can be more than mere rhetorical flourishes; they can have a powerful influence on the practice of medicine and the experience of illness" (Reisfield and Wilson 2004, 4024). They are found to provide "the intellectual and linguistic tools for communication about senseless suffering, and yet also offer a plan for personal transformation in coping with illness" (Gibbs and Franks 2002, 141).

The cancer experience has been commonly described in terms of metaphors, particularly in respect of the shock of diagnosis, the psychological state of patients, their anxiety, pain, and the treatment process (Grant and Hundley 2009, Sontag 1979). The experience of cancer, which is a terminal or chronic disease, belongs to "the kind of complex, subjective, and poorly delineated experiences that tend to be conventionally verbalised and conceptualised through metaphor" (Demjen et al. 2016, 2). Communication is particularly important for cancer patients since they "want consolation and must overcome solitude by articulating experience, being listened to, and, in this way, recreating and strengthening identity" (Skott 2002, 230). Hence, both online discussion boards and support groups are becoming increasingly popular with cancer patients and have almost become the new alternative to face-to-face support groups (Blank et al. 2010, Gooden and Winefield 2007). In their online narratives, patients describe their illness experience from a personal rather than a medical perspective. Metaphors are used in these narratives to help patients establish a kind of understanding of their own experience. It is important, then, for healthcare professionals to

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4 The Country Profiles 2020 for Iraq and Qatar are not available on the WHO website.

focus on the patients' discourse and the metaphors they use in order to develop a common language, and hence, a shared understanding and a connection with patients (Penson et al. 2004).

Most research on metaphor in health communication generally, and more particularly in the discourse of cancer patients, is conducted on English language data. The use of metaphors in the Arabic-language discourse of cancer patients is a topic which, to our knowledge, has not yet been a focus of investigation. Hence, the present study attempts to fill a gap and explores the use of conceptual metaphors in the Arabic discourse of breast cancer patients. Breast cancer is chosen to be the focus of this study as it is the most common form of cancer occurring in women (Jemal et al. 2008).

Our study adopts the conceptual metaphor theory (CMT), which was initially proposed by Lakoff and Johnson (1980) (see also Lakoff 1993, Lakoff and Johnson 1999, Kövecses 2010, Thibodeau and Boroditsky 2011), to classify the metaphors used in the construction of cancer in Arabic language. The study data consist of a corpus containing 13,705 words from the online narratives of 19 different breast cancer patients in 9 articles published by Arabic magazines/newspapers/cancer institutions.

We seek to address several questions about cancer metaphors in Arabic language. First, what are the conceptual metaphors identified in the Arabic online narratives of breast cancer patients? And second, what are the similarities and/or differences between English and Arabic languages with regard to the identified metaphorical constructions?

2 Theoretical frameworks

2.1 CMT

Metaphor can be defined as "a figure of speech in which one thing is compared to another by saying that one is the other" (Kövecses 2010, IV). Research on metaphor has witnessed a radical change with the introduction of the CMT (e.g. Lakoff 1987, 1993, Lakoff and Johnson 1980, Lakoff and Turner 1989, Kövecses 2005, 2010). According to CMT, metaphor can be perceived of as talking and, potentially, thinking about one thing (the topic or target domain) in terms of another (the vehicle or source domain) on the basis of some perceived similarity between them. The target domain is often abstract, complex, subjective, intangible, and/or sensitive, whereas the source domain is often simpler, more concrete, physical, tangible, and less sensitive (Dancygier and Sweetser 2014, Kövecses 2000, Lakoff and Johnson 1980, Semino 2008). In other words, the metaphorical comprehension of one conceptual domain, i.e. the source domain, requires a clear understanding of it in terms of another conceptual domain, i.e. the target domain (Kuzmina 2013). The linking of these two domains as "conceptual domain A is conceptual domain B" is what is known as a conceptual metaphor (Kövecses 2010, 4).

CMT proposes that metaphor is not just an aspect of language, but a fundamental part of human thought with our conceptual system being largely metaphorical (Lakoff and Johnson 1980, 3). Conceptual metaphors can be seen as a "mechanism, through which we comprehend abstract concepts and perform abstract reasoning" (Lakoff 1993, 203). Metaphors play a central role in structuring the way we conceptualise the world around us. Because a lot of our everyday concepts are not easy to comprehend directly, conceptual metaphors make them "accessible through metaphorical 'scaffolds' imported from better-known domains" since they organise what we have already known and experienced of these domains into a coherent framework (Allbritton 1995, 43).

Within CMT, a distinction is drawn between conceptual metaphors on one hand, and linguistic metaphors or metaphorical expressions on the other hand.

> [C]onceptual metaphors are deeply entrenched ways of *thinking about* or *understanding* an abstract domain, while conventional metaphorical linguistic expressions are well worn, clichéd ways of *talking about* abstract domains. (Kövecses 2010, 34)

In other words, the conventional metaphorical expressions can be seen as evidence of patterns of metaphorical thought known as *conceptual metaphors*. For example, it could be argued that the metaphorical use of military vocabulary to talk about illness reflects the conceptual metaphor ILLNESS IS WAR, where illness is the "target" domain and war is the "source" domain (Demmen et al. 2015, 207).

There are three basic kinds of conceptual metaphors that shape human thought, namely, structural, ontological, and orientational (Ibrahim 2019). Structural metaphors refer to metaphorically structuring one concept in terms of another (Lakoff and Johnson 1980, 14). Examples can be seen in the conceptual metaphors CANCER IS WAR and CANCER IS A JOURNEY, which structure the target domain "Cancer" in terms of the source domains "War" and "Journey," respectively, and can be realised in a diversity of common linguistic metaphors such as "He is *battling* cancer," "The immune system is fighting cancer cells," and "He has *a long way to go* to recovery" (Kövecses 2010, Penson, et al. 2004, Reisfield and Wilson 2004, Semino and Steen 2008).

Ontological metaphors are grounded in our experiences with the physical world (Lakoff and Johnson 1980, 25). Actually, when thinking of a non-physical phenomenon as an entity or substance, we are allowed to identify, quantify, categorise, and refer to it – and, in this way, reason about it (Lakoff and Johnson 1980, 25, Kövecses 2010, 39). Personification is a kind of ontological metaphor whereby human characteristics, motivations, and activities are assigned to non-human entities (Lakoff and Johnson 1980, 33, Kövecses 2010, 39). Personification can be used as a way to construct an illness, such as for example cancer, as in: "Cancer finally caught up with him" (Kövecses 2010, 35).

Finally, orientational metaphors organise "a whole system of concepts with respect to one another." They are based on spatial orientations such as up and down, in and out, front and back, central and peripheral. Such metaphorical orientations are not randomly assigned; rather, they are embodied in our physical, social, and cultural experience (Lakoff and Johnson 1980, 14). The orientational metaphor HAPPY IS UP, for example, provides an upward orientation that is coherent with such positive cases as GOOD IS UP, ALIVE IS UP, CONTROL IS UP; while SAD IS DOWN provides a downward orientation which is coherent with negative cases such as BAD IS DOWN, DEAD IS DOWN, LACK OF CONTROL IS DOWN (Lakoff and Johnson 1980, 18).

It should be noted that, according to the tenets of CMT, the linguistic metaphors used in everyday language, in the literature, in the press, and other genres are based on the same conceptual metaphors (Ibrahim 2019). Writers/Journalists manage to make their metaphors more resonant through masterfully adopting mechanisms such as extension (extending conventional metaphor by mapping additional slots), elaboration (filling in slots in uncommon ways rather than adding new elements to the source domain), and combination (the simultaneous use of two or more conceptual metaphors) (Lakoff and Turner 1989, 67–72).

Conceptual metaphors have been extensively studied in various disciplines including cognitive linguistics (e.g. Lakoff and Johnson 1980, Ritchie 2013), literature (e.g. Semino and Steen 2008, Hawkes 2017), philosophy (e.g. Cazeaux 2007), psycholinguistics (e.g. Paivio and Walsh 1993), rhetoric (e.g. Kelle 2005), sociolinguistics (e.g. Kövecses 2005), politics (e.g. Ibrahim 2019, Musolff 2016), economics (e.g. Koller 2004), and education (e.g. Cameron 2003). There are a number of studies that have focused on metaphor in the English-language discourse of cancer patients (e.g. Casarett et al. 2010, Clow 2001, Demmen et al. 2015, Fillion 2013, Gibbs and Franks 2002, Hendricks et al. 2018, Penson et al. 2004, Reisfield and Wilson 2004, Semino et al. 2017, 2018, Semino and Demjen 2017, Skott 2002, Sontag 1979).

CMT is the main theoretical framework in the current study, since a conceptual metaphor analysis can reveal how cancer patients construct their illness experience and to what extent this construction is universal across languages, particularly English and Arabic. Following Semino et al. 2017, our approach to metaphor in this study is influenced by CMT in two main respects: "we regard metaphor in language as related to metaphor in thought, and we attribute to metaphor an important framing function, which is particularly relevant to the context of serious illnesses such as cancer" (Semino et al. 2017, 8).

2.2 Framing cancer metaphors in English discourse

Metaphors can guide thought (see Thibodeau et al. 2017 for review). They can *frame* a topic, or a target domain, in different ways, highlighting some aspects and backgrounding others (Cameron et al. 2010, Jia and Smith 2013, Lakoff and Johnson 1980, Landau et al. 2009, Lee and Schwarz 2014, Ritchie 2013, Semino et al. 2017, Thibodeau and Boroditsky 2011, 2013, Thibodeau et al. 2017). Framing can be described as "the process of using words and phrases to establish a particular way of thinking about a topic or a social interaction" (Ritchie 2013, 106). Framing essentially involves selecting "*some aspects of a perceived reality*" and making "*them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation*" for that perceived reality (Entman 1993, 52; italics in original).

Metaphors can influence the way we think of the emotionally distressing experience of cancer; moreover, they structure our understanding of the condition (Gibbs and Franks 2002). Indeed, different framings of cancer have potential consequences for how patients construct their situation (Thibodeau and Boroditsky 2011) in the sense that "[u]nderstanding the impacts of different metaphors may help us use them in ways that are most helpful to patients' particular situations and mindsets" (Hendricks et al. 2018, 269).

Studies of metaphors in the English discourse about cancer provide quantitative evidence that cancer tends to be framed in terms of *War* and *Journey* metaphors (Fillion 2013, Gibbs and Franks 2002, Penson et al. 2004, Reisfield and Wilson 2004, Semino et al. 2017). These metaphors typically suggest different framings of the cancer experience. The construction of cancer in terms of war is sometimes referred to as "the military metaphor" (Miller 2010) and the "martial metaphor" (Reisfield and Wilson 2004), and is often described as "masculine, power-based, paternalistic and violent" (Reisfield and Wilson 2004, 4025, Bleakley et al. 2014, 25). War metaphors predominate in English cancer discourse, particularly in the United States and the United Kingdom (Demmen et al. 2015, Granger 2014, Miller 2010, Penson et al. 2004, Potts and Semino 2017, Reisfield and Wilson 2004, Semino et al. 2017, 2018, Sontag 1979). So it follows that the CANCER IS WAR metaphor is so prevalent in English language that it has become almost unnoticeable and exists at the level of cliché.

Journey metaphors, on the other hand, occupy the second position after war metaphors in terms of their frequency (Demmen et al. 2015, Semino et al. 2017, 2018). In these metaphors, the cancer experience can be seen as a path or a process (Harrington 2012, Reisfield and Wilson 2004), with cancer conceived of as a companion to travel with or a road to travel on with impediments to moving forward. The CANCER IS JOURNEY metaphor "offers excellent cross-domain mapping. It allows for discussions of goals, direction and progress. Quieter than the [war] metaphor, it still has depth, richness, and gravitas to be applicable to the cancer experience" (Reisfield and Wilson 2004). The two framings can be seen in Examples (1) and (2) as follows:

(1) I have kind of prepared myself for a battle with cancer;
(2) We are on the Bowel cancer journey (Demmen et al. 2015, 207).

Each framing implies a different relationship between the patient and the disease, and may therefore "reflect and reinforce different ways of conceiving of as well as experiencing the illness, with potential bearing on the individual's sense of self" (Demmen et al. 2015, 209).

When cancer is framed via war metaphors, recovery is conceived of as victory (Reisfield and Wilson 2004) and lack of recovery as defeat (Granger 2014). Patients are depicted as warriors, cancer survivors as "victims" or "heroes" (Little et al. 2002, 176), and treatment is to be sought at all costs (Harrington 2012). War metaphors in relation to cancer have been widely criticised, primarily because they construct *patients* and *illness* as opponents/enemies, and suggest that lack of recovery or recurrence is a matter of personal failure or shame (Demmen et al. 2015, 207, Semino et al. 2017, 63). Recent policy documents on cancer care in the United Kingdom have avoided the construction of cancer in terms of war metaphors and have not used war-related words such as "battle," "war," and "fight." These documents now tend to favour journey

metaphors and construct the cancer experience as the patient's "journey," and different treatment plans as "pathways" (e.g. the 2007 *NHS Cancer Reform Strategy*[5] and the 2015–2020 *Cancer Strategy for England*[6]).

However, war-related metaphors are still used intensively in the discourse about cancer and they can be motivating for some patients (Reisfield and Wilson 2004). Cancer patients tend to be conceived of as "literally fighting for their lives" (Mongoven 2006, 404). In this case, "heroic fighting language" may be taken as an inspiration for some cancer patients to do whatever is possible to become better (Seale 2001, 325).

The English discourse about cancer is also characterised by the presence of what can be called the *Think Positive discourse*. The *Think Positive discourse* serves the rhetorical function of persuading cancer patients to be optimistic and to cope with their illness experience. This discourse is pervasive in the survivors' narratives of their cancer experiences (Wilkinson and Kitzinger 2000, Willig 2009 2011, 2012).

Following Semino et al. (2017), our approach to metaphor in this study is influenced by CMT in two main respects: "we regard metaphor in language as related to metaphor in thought, and we attribute to metaphor an important framing function, which is particularly relevant to the context of serious illnesses such as cancer" (Semino et al. 2017, 8).

3 Methodology

The corpus, which consists of 19 cancer patient narratives, was downloaded from nine different websites of Arabic magazines/newspaper/cancer institutions (as shown in Table 2) by using the search words قصص مرضى السرطان [cancer patients' stories]. All of the narratives were written in the first-person by women reporting their experiences with breast cancer. Eighteen of those narratives were recounted by cancer survivors, i.e. breast cancer patients who have gone through treatment and finished it, and only one by a patient who was still in the treatment process.

We identified the metaphors related to cancer through manual analysis using the Pragglejaz Group's (2007) *Metaphor Identification Procedure*. This procedure involves reading the entire corpus intensively to establish a general understanding of its meaning and to determine the lexical units related to cancer in each narrative. We determined the contextual and basic meaning of these lexical units. When the contextual meaning of a lexical unit differed from its basic meaning, which tends to be a "more concrete, related to bodily action, more precise or historically older" meaning (Camus 2016, 117), we marked it as metaphorical.

For example, in the corpus the lexical unit *riḫlah* [journey] is used to describe the process of cancer from diagnosis to recovery. The basic meaning of the word *riḫlah* [journey], according to *muʿjam ilmaʿa:ni ilja:miʿ* [6] معجم المعاني الجامع [the Comprehensive Dictionary of Meanings], refers to *ilʔirtiḥa:l or ʔintiqa:l ʔila maka:n ʔa:khar* الارتحال ، انتقال إلى مكان آخر [travel to another place]. In this case, the contextual and basic meanings of the word *riḫlah*, in *baʿda riḥlat ilmaraḍ* [after the journey of the disease], diverge as cancer is not literally a journey which takes one to another place. Hence, the word *riḫlah* is used metaphorically in this context, thus creating many entailments for our understanding of cancer: the patient is mapped onto the traveller, alternative treatment procedures onto pathways, pain and negative repercussions are mapped onto obstacles, and so on. The patient goes through her cancer journey, adopts a certain treatment pathway, overcomes all obstacles, and reaches her destination where she regains her health.

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5 https://www.nhs.uk/NHSEngland/NSF/Documents/Cancer%20Reform%20Strategy.pdf.
6 https://www.cancerresearchuk.org/sites/default/files/achieving_world-class_cancer_outcomes_-_a_strategy_for_england_2015-2020.pdf.

Table 2: Websites from which the cancer patient narratives were downloaded

	Website	Magazine/Newspaper/Institution
1	https://nccfyemen.org/المرضى-عن/al-amal-hospital-for-the-treatment-of-tumors-of-aden/	ilmuʔassasah ilwaṭaniyyah limuka:faḥat ilsaraṭa:n [National Centre Control Foundation]
2	https://www.lahamag.com/article/34752-3-الدي-سرطان-نجارب-مؤثرة-في-مواجهة	laha: [For Her]
3	https://meemmagazine.net/2018/01/28/العالم-انتقي-قصص-مغربيات-السرطان-من/	mi:m mirʔa:t ilmujtamaʕ [MEEM: Mirror of Society]
4	https://www.youm7.com/story/2016/2/20/بالارادة-2593736-أنت-من-المرض-الخبيث-الأطفال-محاربون/أقوى-والسرطان	ilyu:m ilsa:biʕ [The 7th Day]
5	https://www.alaraby.co.uk/society/2017/2/4/قصة-سرطان-الدي-خديجة-مع	ilʕarabi: [The Arab]
6	https://alraynews.net/6376605.htm	ilraʔy [The Opinion]
7	http://www.alhayat.com/article/866286/الموت-حافة-المرض-المكافحة-مكة-مجلات/منفلوث-من-السرطان-يروون-السعوديون-قصصهم	ilḥaya:h [Life]
8	https://www.7iber.com/society/breast-cancer-survivors-tell-their-stories/	ḥibr [Ink]
9	https://makkahnewspaper.com/article/78312	makkatu almukarramatu

Table 3: Metaphors in the Arabic Corpus

	No. of words	%	No. of metaphors	%
CANCER IS WAR	1,184	33.5	68	35.4
CANCER IS A JOURNEY	628	17.9	37	19.3
Ordeal	392	11	18	9.3
Support	383	10.8	18	9.3
Character transformation	222	6	12	6.2
Difficulty of treatment	218	6	11	5.7
Experience	208	5.9	11	5.7
"War and Journey" metaphors	97	2.7	6	3
Shock	82	2.3	6	3
Trauma	117	3.3	5	2.6
Total	3,531	100	192	100

4 Analysis

We extracted 192 expressions used metaphorically from the corpus. We counted the words within the linguistic expressions that had been identified as being metaphorical and found that they constituted 25.8% of the whole corpus, about 3,531 words. More than half of these linguistic expressions provided examples of the conceptual metaphors of CANCER IS A WAR and CANCER IS A JOURNEY. The rest of the metaphorical expressions either combined these metaphors with each other or with ideas such as support from others and difficulty of treatment; or represent the disease as an ordeal, a cause for character transformation, a difficult experience, a shock, or a trauma (Table 3).

An examination of the percentages and the occurrences of the metaphors in the Arabic data shows that the corpus includes 192 conceptual metaphors in a total number of 3,531 words. The notable presence of metaphors, which constitute 25.8% of the whole corpus, can be indicative of the intense emotions of the cancer patients/survivors when they articulate their illness experiences. Having *War* and *Journey* metaphors as the two most frequent metaphors in this sample of Arabic discourse demonstrates a similarity with English discourse about cancer.

It is important to explore the specific word choices used by cancer patients/survivors to describe their illness experiences since they might reflect their self-perceptions and feelings (Semino et al. 2017). We identified and counted the occurrences of the lexical items,[7] which provide patterns of conceptual metaphors in our data. Cancer itself, as a discursive object, has been dubbed as *ilda:ʔ* [the disease] (5), *qa:til* [killer] (3), *qa:si* [cruel] (2), *sharis* [ferocious] (2), *murʕib* [terrifying] (1), *waḥsh* [monster] (1), and *ilkhabi:th* [the malignant] (1). The cancer experience has been referred to as *tajribah* [experience] (20), *tajribati:* [my experience] (3), *ʔazmah* [crisis] (2), *ṣadmah* [shock] (4), *miḥnah* [plight] (4), *miḥnatihim* [their plight] (1), *ʔibtila:ʔ* [trial by ordeal] (5), and *ṣaʕbah* [difficult] (6) (Table 4).

The patterns exemplified by the use of these lexical items can be seen as realisations of conventional conceptual metaphors, namely, CANCER IS WAR or BEING ILL WITH CANCER IS A VIOLENT CONFRONTATION WITH THE DISEASE, CANCER IS A JOURNEY, and CANCER IS A TEST OF FAITH.

We have noticed that similar lexical items are used in both English and Arabic. Examples of English lexical items, according to Semino et al.'s (2018) corpus-based study of end-of-life metaphors include "going through," "battle," "fight," and "support," among others. Equivalents of these lexical items are found in the Arabic data, as shown above.

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7 We provide the English translation and the number of occurrences (between brackets) for each lexical item.

Table 4: The lexical items which provide patterns of conceptual metaphors

War	*quwwah* [strength] (19)/*muwa:jahah* [confrontation] (8)/*muqa:wamah* [resistance], *qawiyyah* [strong] (female) (5)/*ma'rakah* [battle], *muwa:jahatihi* [to-confront-it] (4)/*na:jiya:t* [survivors], *muka:fahah* [combating], *ʔuwa:jih* [I-confront], *ʔintaṣarna* [they-won], *iltaghallub* [overcoming], *taghallabtu* [I-overcame], *shaja:'ah* [courage], *qawiyyan* [strong], *yaqtil* [kill] (3)/*tahaddi* [challenge], *muha:rabah* [fighting], *qa:wamt* [I-resisted], *ʔasmud* [I-endure], *yuqa:wimna* [they-resist], *taqwiyah* [strengthening], *hazamu:* [they-defeated], *hazamtu* [I-defeated] (2)/*na:jiyah* [survivor], *ma'rakati* [my-battle], *najawt* [survived], *ha:rabt* [I-fought], *ha:rabu:* [they-fought], *ha:rabna* [they-fought], *muha:ribi* [fighters], *muha:ribah* [fighter], *tuha:rib* [she-fights], *ṣira:'* [struggle], *wa:jaht* [I-confronted], *yuwa:jihna* [they-confront], *tuwa:jih* [she-confronts], *wa:jihi* [(you) confront], *wa:jahu:* [they-confronted], *ʔuna:ḍil* [I-struggle], *yuna:ḍilu:* [they-struggle], *ilnaja:h* [survival], *ʔintaṣartu* [I-triumphed], *muntaṣirah* [victorious], *ʔintiṣa:ri* [my-victory], *kasabtu* [I-won], *tataghallab* [she-overcomes], *yataghallab* [it-overcomes], *taghallabu:* [they-overcame], *ṣumu:d* [resilience], *ṣamadna* [they-endured], *yuqawwi:ni* [strengthening-me], *taqwiyati* [my-strengthening], *qawaytu* [I-am-strengthened], *ilqawiy* [the-strong], *tasallaḥtu* [I-was-armed-with], *najaḥtu* [I-succeeded], *yahzimani* [it-defeats-me], *khisa:rat ilma'rakah* [loss-of-battle], *yaqtaḥimak* [breaks-into-you], *taḥti:maha* [its-destruction], *yastaslimu:n* [they-surrender], *yastaslimu:* [they-surrender], *ʔastaslim* [I-surrender], *ʔilistisla:m* [surrender], *ʔistisla:mi* [my-surrender], *mu'a:na:tihim* [their-suffering], *ʔaḍ'af* [I-weaken], *yaḍ'af* [weaken], *fari:sah* [prey], *yaftik* [decimate], *ʔashaddu fatkan* [deadlier], *juru:ḥ* [wounds], *tanzif* [bleeds] (1)
Journey	*marḥalah* [stage] (16)/*riḥlah* [journey] (7)/*maḥaṭṭah* [station] (6)/*iṭṭari:q* [the-path/road], *takhaṭṭi* [skipping/getting-over], *marrat* [went-through] (female) (4)/*taja:waztu* [I-got-through/overcame], *niha:yah* [end], *bida:yah* [start], *yaṣil* [arrives], *tamur* [goes-through] (female) (3)/*taja:waza* [got-through/overcame], *mara:ḥil* [stages], *irraḥi:l* [departure], *muwa:ṣalat* [continuation/pursuit], *namḍi* [move-on] (2)/*taja:wazu:* [they-got-through], *ʔijtazna:* [we-got-through/overcame], *ʔijtiya:z* [getting-through/overcoming], *'a:ʔida:t* [returnees], *'udna:* [we-returned], *'udna* [they-returned] (female), *ʔa'a:dani ila nuqṭat issifr* [brought-me-back to square one], *ra:ḥi:laha* [her-departure], *beda:yati* [my-start], *riḥlati* [my-journey], *mishwa:raha* [her-trip], *yamrurna* [go-through], *mararna* [went-through] (female - plural), *marru:* [went-through] (plural), *satamur* [will-go-through] (female), *ilmuru:r* [going-through], *maḥaṭṭa:t* [stations], *khuṭwa:t* [steps] (1)
Test of faith	*ʔi:ma:n* [faith] (7)/*qaḍa:ʔ* [Allah's decree] (4)/*iṣṣabr* [patience], *ʔibtila:ʔa:t* [trials by ordeal], *ilqaḍar* [destiny] (3)/*maktu:b* [destined], *ʔiṣbir* [be-patient], *ṣabri* [my-patience], *ʔibtila:ʔ* [trial by ordeal], *ʔikhta:rani liyakhtabir ṣabri* [God chose-me to test my-patience] (2)/*ʔi:ma:ni* [my-faith], *qaḍari* [my-destiny], *yakhtabirhu* [test-someone] (1)
Support	*idda'm* [the-support] (23)/*da'm* [support] (14)/*ʔi:jabiyyah* [positive] (10)/*da'mahum* [their-support] (2)/*da'amani* [supported-me], *ʔad'amha* [I-support her], *yad'amu:hum* [they-support-them], *da'amtu* [I-supported], *ʔad'amu* [I-support], *da'amaha* [support her], *da:'im* [supporter], *muda''imah* [supporter] (female) (1)

We provide below some illustrative examples of (1) the most frequent source domains, namely WAR and JOURNEY, and their combinations with each other; (2) metaphors featuring notions of support, and difficulty of treatment; and (3) the representation of cancer as a vehicle affording positive change in patients and as an ordeal.

4.1 War metaphors

We have identified in our data about 68 war metaphors, such as examples 1–15 in Table 5.

Cancer patients are referred to as *muha:ribi/muha:ribu:n* [fighters] (in examples 2 and 13), as *ʔabṭa:l/ilʔabṭa:l* [heroes] (2 and 3), and as *ilna:jiya:t* [the survivors] (1). These references can be taken to involve (self or mutual) praise and encouragement, and to frame cancer patients and survivors in a positive and empowered way (see Gibbs and Cameron 2008, Deignan et al. 2013 for similar results in English language). Patients tend to describe themselves and others as "fighters" in ways that suggest agency and pride. One patient attributes her desire to overcome cancer to the fact that she loves life (5) and another to the fact that she wants to prevent her family from collapsing (15). The use of the term *ilna:jiya:t* [survivors] (1), i.e. the

Table 5: Examples of *War Metaphors* in the data

No.	Metaphor	Translation
1	*fi ghamrat ʔiḥtifa:lina: bilna:jiya:t yaḥduth kathi:ran an nakhtazil taja:ribihunna maʕa ilmaraḍ fi nati:jatiha: inniha:ʔiyyah wa hiya ilshifa:ʔ*	In our celebration of the survivors, it usually happens that we reduce their experiences with the disease to its final result, which is recovery
2	*ʔabṭa:l muḥa:ribu:n qaharu: ilsaraṭa:n bilʔira:dah walʕazi:mah*	Warrior heroes who have vanquished cancer with will power and determination
3	*nama:zij ḥaqi:qiyyah limajmu:ʕah min ilʔabṭa:l illadhi:na hazamu: ilkhabi:th wastaṭa:ʕu: qahr ilsaraṭa:n bilʔira:dah waltaḥaddi*	True examples of a group of heroes who have defeated the malignant, and managed to vanquish cancer with will power and challenge
4	*ṭallaqaha: zawjaha: baʕdma: ʔiktashafa ʔiṣa:batiha: bilsaraṭa:n wantaṣarat*	Her husband divorced her when he knew of her cancer… and she was victorious
5	*waqultu linafsi lan ʔastaslim lihadha ilmaraḍ faʔana ʔuḥibbu ilḥaya:h*	I said to myself: I will not surrender to this disease because I love life
6	*kasabtu ʔawal maʕrakah fi maraḍi*	I won the first battle in my disease
7	*tilka laḥaTHa:t ṣaʕbah ʕishtaha fi maʕrakati:*	These were difficult moments I lived in my battle
8	*ka:nat ʕa:ʔilataha: tuwaddiʕ ʔukhtaha: ilkubra: illati ka:nat tuka:fiḥ ilmaraḍ min tisʕ sanawa:t wa tu:shik ʕala khisa:rat ilmaʕrakah*	Her family was saying goodbye to her elder sister who had been fighting the disease for 9 years and was about to lose the battle
9	*waʔashʕuru ʔaḥya:nan bilzanb liʔanni najaḥtu fi:ma: fashalat shaqi:qati:*	Sometimes, I feel guilty because I succeeded and my sister failed
10	*ka:na ṣira:ʕan qa:siyan*	It was a cruel struggle
11	*kama: ʔanṣaḥuha: bilʔiṭṭila:ʕ lilḥuṣu:l ʕala ilmaʕlu:ma:t illa:zimah lituḥa:rib maraḍaha: bishaklin ʔafḍal*	I also advise her to gather necessary information in order to fight against her disease better
12	*ilnisa:ʔ illawa:ti ḥa:rabna ilmaraḍ wantaṣarna ʕalayhi*	The women who fought against the disease and beat it
13	*waʔassastu fari:qan taṭawwuʕiyyan lidaʕm muḥa:ribi: ilsaraṭa:n*	I established a group of volunteers to support cancer fighters
14	*ʕazi:zati ilmuṣa:bah bilsaraṭa:n ilthady ku:ni: qawiyyah wa:jihi ilsaraṭa:n wala tajʕali:h yataghallab ʕalayki:*	Dear breast cancer patient: be strong, confront cancer and don't let it beat you
15	*wa ʔistisla:mi: ka:na saya:ʕni: ʔinhiya:r ilqari:bi:n minni lihadha qarrartu ʔannani saʔastamirru biḥaya:ti:*	My surrender would mean the falling apart of my close ones. That's why I decided that I will remain alive

Note: the relevant expressions are underlined.

brave fighters who have won the battle, to refer to the cancer patients who have overcome the illness and recovered their health can be considered an extension of the WAR metaphor. This extension implies that patients who have a terminal diagnosis and die of cancer, on the other hand, would be framed as victims who have lost the battle.

The WAR metaphor is likely to have other entailments. For example, military strength for cancer patients undergoing treatment becomes metaphorically associated with the patient's determination, emotional strength, or will power (2 and 3). In other words, these facets of a patient's strength of character get mapped onto weapons which guarantee the patient's victory in the war against cancer.

In line with Demmen et al., 2015, the Arabic war-related expressions are found to suggest three main scenarios, corresponding to different stages of military confrontations: PREPARING FOR BATTLE (11), ENGAGING IN BATTLE (14), and OUTCOME OF BATTLE (8 and 12). In the case of the OUTCOME OF BATTLE scenario, for example there are two alternative outcomes: either victory which corresponds to recovery and regaining health (e.g. 1, 2, 3, 4, 6, 12) or losing the battle and failure which corresponds to death (e.g. 8, 9). The first alternative frames the patient as a hero and places her in an active, empowered position. It can be used to inspire will power, determination, and optimism. The second alternative, on the other hand, frames the patient as a victim, and places her in a disempowered position. This sense of failure may lead to feelings of guilt whether they be in the patient who may think that she did not fight hard enough or whether they be in the survivors when they think of others who could not overcome the illness. An example of this kind of

feeling, which can be seen as a negative effect of the CANCER IS WAR metaphor, is detected in our data: one of the survivors had a sister who died of cancer and she feels guilty that she has lived while her sister died (8 and 9). Similar considerations apply to the ENGAGING IN BATTLE scenario, which can be used in both empowering ways: to suggest determination and will power to maintain the struggle against cancer (5, 6, 14, and 15) as well as in disempowering ways to suggest frustration, cruelty, and the difficulty of the process (7 and 10).

Examples 7–10 express negative emotions and refer to the difficulty of the struggle against cancer. This is particularly obvious in 8 and 9: the fact that treatment has not worked for the older sister is described as "almost losing the battle after 9 years of struggle" (8), and as "a failure" (9). Positive emotions, on the other hand, which evoke the *Think Positive* discourse, can be found in examples 1–6 and 11–14. The examples, which show optimism and reflect a fighting spirit, foreground the patient's own agency and her determination to win battle against cancer. They also suggest self and mutual pride and encouragement. According to Byrne et al. (2002), there is a link between the cancer patient's wish to conceal distress from other people and the use of war-related lexical items. In (15), the patient frames her surrender to cancer as something fatal to her family, which can be prevented by the patient's determination to proceed with life.

There is a normative approach to the battle script in the corpus, which can be detected in the direct reference to "war," "fight," and "battle" (2, 6, 7, 8, 11, 12, and 13), and the use of the negated imperative "do not let it conquer you" (14), and the negative verb "I will not surrender" (4).

4.2 Journey metaphors

The journey metaphors, in Table 6, cluster around several lexical items including *riḥlah* [journey] (21, 29), *ilṭari:q* [path] (22, 24), *manḥa:* [course] (18), *taja:wazt* [got through] (20), *takhaṭṭi* [got over] (26),(*il*)*marḥalah* [stage] (20, 25, 26, 27), *ilmaḥaṭṭah* [station] (21), *rafi:qati:* [companion] (26), *taʿu:d* [they return] (25), *waʔaʿu:d* [I return] (27), *maḥaṭṭa:t* [stations] (28), *bida:yati:* [my start] (19), *niha:yat* [ending] (17), and *ilraḥi:l* [departure] (16).

The *Journey* metaphors in examples 16–24 are used in disempowering ways and convey negative feelings. They express a sense of lack of control over the illness situation since patients emphasise the overwhelming difficulties of the cancer experience. Patients refer to the dangerous stage which has to be passed (20); the exhausting tiring journey (21); the path to recovery which is overwhelmed with weakness, frustration, and betrayal (22); going back to square one (23); and the "thorny path" which has to be trodden to reach recovery (24). Thus, through journey metaphors, the cancer patient is framed as a traveller on a difficult journey. Examples 26 and 27, on the other hand, work in potentially empowering ways since they are used to convey a sense of determination and companionship. In 26, the patient states that the presence of her family helped her go through the journey; whereas the patient in 27 expresses her determination to finish her treatment, regain her health, and get back to normal. The *Think Positive* discourse is present in 25, 27, and 29, which show how the patients believe that the disease is only a temporary phase that will end, so that they will get better, and their life will go back to normal.

Both *war* and *journey* metaphorical constructions of cancer are predominant in Arabic discourse about cancer. This is evident not only in our data, as shown above, but also in the television advertisements[8] about cancer. These advertisements tend to employ both WAR and JOURNEY metaphors and are characterised by the *Think Positive discourse*.

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8 The 57357 Children's Cancer Hospital in Egypt sponsors fundraising advertising campaigns. For example, check https://www.youtube.com/watch?v=wBsR4ytS7MQ https://www.youtube.com/watch?v=W8BJvK5TB7o.

Table 6: Examples of *Journey Metaphors* in the data

No.	Metaphor	Translation
16	*shaʿartu bilrahbah walkhawf biʔanna saːʿat ilraḥiːl qad ʔazafat wala: ʔaʿlam kam tabaqqaː liː min ilwaqt*	I felt terrified that the time of departure is approaching and I don't know how much time is left for me
17	*inti ʿandik saraṭaːn wibadna: nistaʔṣil ilthady wi haːy mish nihaːyat ilḥayaːh*	"you have cancer… we need to remove the breast … this is not the end of life"
18	*lihadha: iltaːriːkh ʔahammiyyah khaːṣah … faqad ḥawwala ḥayaːti: wa ʔawlawiyyaːti: ʔila manḥaː jadiːd*	This date is particularly important … since it has changed the course of my life and my priorities
19	*tilka hiya bidaːyati: maʿa saraṭaːn ilthady*	This was my start with breast cancer
20	*wa ʔidha tajaːwaztu hadhihi ilsaːʿaːt fasaʔakuːn tajaːwazt ilmarḥalah ilkhaṭirah*	If I got through those hours, I would have passed the dangerous stage
21	*min huna: ʔbtadaʔat riḥlat ilsafar ilʔukhra: naḥwa ilmaḥaṭṭah ilthaːniyah ḥaqiːqah kaːnat riḥlah mutʿibah munhikah saqaṭa ilshaʿr wa zahabat shahiyyat ilʔakl*	From that point, the other journey started towards the second stage. Actually, it was a very tiring and exhausting journey. The hair fell off; the body withered; and the appetite was lost
22	*ilṭariːq ʔila ʔilshifaːʔ bilḍaruːrah ḥaːfilah bilaḥaTHaːt ilyaʔs walḍaʿf wa rubbama: ilkhidhlaːn*	The path to recovery necessarily has moments of desperation and weakness and probably frustration
23	*hadha: ilmawqif ʔaʿaːdani: ila nuqṭat ilsifr*	This situation brought me back to Square One
24	*ilṭariːq ilshaːʔikah illati qaṭaʿtaha: naḥwa ʔilshifaːʔ*	The thorny path which I have trodden towards recovery
25	*lam tashʿur wa law lilaḥTHah ʔannaha: tafqid ʔunuːthataha: kama: yaḥṣul maʿa kathiːraːt ʔadrakat ʔannaha: marḥalah tamur biha: wa surʿaːn ma: taʿuːd ilʔumuːr ʔila saːbiq ʿahdaha:*	She has not felt, even for a moment, that she is losing her femininity, as is the case with many women. She realised that it is only a stage she is going through and things will go back to normal very soon
26	*wama: saːʿadani: fi takhaṭṭi hadhihi ilmarḥalah bishaklin ʔafḍal wuquːf ilkul bija:nibi: min ʿaːʔilah wa ʔasdiqaːʔi: wa ka:nat ʔukhti: bishaklin khaːṣ rafiːqati: ilda:ʔimah fi hadhihi iltajribah*	What helped me to get over this stage is the support of my family and friends. My sister was particularly my constant companion in this experience
27	*ʔaqnaʿtu nafsi ʔanna hadhihi marḥalah ʿaːbirah wasatamur wa ʔannani: saʔunhi: ilʿilaːj waʔaʿuːd wayaʿuːd zawaːji: kama: kaːn*	I convinced myself that it is a brief passing phase, that it will be over, and that I will be back and my marriage will go back to what it used to be
28	*tajribati: bikul basaːṭah marrat ʿabra thalaːth maḥaṭṭaːt muhimmah*	My experience simply passed through three important stages
29	*fi bidaːyat ilmaraḍ kaːnat ʔawlawiyyaːti: maḥṣuːrah fi shaʿri: wa ʔalla: ʔabtur thadyi: baʿda riḥlat ilmaraḍ ʔaṣbaḥtu ḥariːṣah ʿala ʔan ʔaʿiːsh biṣiḥḥah jayyidah mutashabbithah bijamaːl ilḥayaːh*	In the beginning of the disease, my priorities were confined to my hair and the removal of my breast. After the journey of the disease, I have become keen to just survive, to live with good health and enjoy the beauty of life

4.3 Combinations of WAR and JOUNRREY metaphors

Patients sometimes combine both *WAR* and *JOURNEY* metaphors in their narratives (Table 7).

Cancer patients are depicted as travelling on a journey in which they have fought cancer and returned victorious (30, 31, and 32). This combination is further extended through depicting the victorious returnee as paving the way for other cancer patients by motivating them to follow her example (33). Example 34 tackles another aspect of the war–journey combination focusing mainly on the weapons one is armed with to overcome the obstacles in the cancer journey, namely, will power, stable psychological state, and high morale. Example 35 also tackles another aspect of the war–journey combination in which the patients' fight against cancer has proved to be a life-changing, turning point in their lives.

Table 7: Examples of combinations of WAR and JOUNRREY *Metaphors* in the data

No.	Metaphor	Translation
30	*ʿa:dat min bara:thi:n ilmaraḍ muntaṣirah*	She returned victorious from the clutches of the disease
31	*ʿa:ʔidu:n min maraḍ ilsaraṭa:n hazamu: ilyaʔs*	The returnees from cancer who defeated despair
32	*taghallabu: ʿala ilsaraṭa:n wa tabiʿa:t ḥuqan ilki:ma:wi: baʿda ma: ka:nu: ʿala buʿd khuṭwa:t min ilmawt*	They overcome cancer and the effects of chemotherapy after being steps away from death
33	*wa tuḥdithu shaha:dat kul ʔimraʔah ḥa:rabat ilmaraḍ wa taghallabat ʿalayhi ʿala ṭari:qatiha: fa:riqan kabi:ran bilnisbah ʔila ʔukhraya:t fatumahhid ilṭari:q lahunna liyaqumna bilmithl yuwa:jihna ilmaraḍ bishaja:ʿah wa ʿazm wa ʔira:dah*	The testimony of each woman who has fought the disease and overcome it makes a big difference to others, paving the path for them to do the same and confront the disease with courage, determination, and will power
34	*tasallaḥtu bikathi:r min ilʔira:dah illati sa:ʿadatni: ʿala taja:wuz ilmarḥalah binafsiyyah murta:ḥah wa maʿnawiyya:t murtafiʿah*	I was armed with loads of will power which helped me to get through this stage with a relieved state of mind and high morale
35	*sala:m wa mirna: wa jimi wa:jahna ilmaraḍ wa ʿishna taja:rib saʿbah takhtalif kul minha: ʿan ilʔukhra: lakinnaha: tushakkil maʿan nuqṭat taḥawwul fi ḥaya:t kul minhun*	Salam, Mirna, and Jimmy have confronted the disease and lived through difficult experiences which differ from each other but together constitute a turning point in the life of each of them

4.4 Combinations of WAR/JOURNEY metaphors with notions of support and difficulty of treatment

4.4.1 Support

When confronted with cancer, the patient experiences intense emotions such as fear and anxiety. Such emotions make the patient vulnerable and in need of support and consolation from others. There is evidence in previous research that emotional and psychological support provides the patient with a sense of wellbeing and helps him/her cope with the trauma of cancer (LeMay and Wilson 2008). The provision of support tends to be associated with *War* and *Journey* metaphors in our data (Table 8).

The support of family and friends is depicted as a sort of weapon or ammunition enhancing one's ability to fight cancer and increasing the possibility of one's victory (36, 37, and 38). Cancer is described in 38 as

Table 8: Examples of *Support Metaphors* in the data

No.	Metaphor	Translation
36	*min khila:l daʿm ʔusratiha: wa mujtamaʿiha: ʔistaṭa:ʿat muḥa:rabat ilsaraṭa:n*	Through the support of her family and her community, she managed to fight cancer
37	*ṣadi:qa:t wa ʔaṣdiqa:ʔ maddu: ʔilayya yad ilʿawn wa sa:hamu: fi taqwiyat ʿazi:mati: wa ʔintiṣa:ri: ʿala ilmaraḍ*	Female and male friends have supported me and contributed to strengthening my will and my victory over the disease
38	*ḥaythu ʔakkadat ilʿadi:d min ilʔabḥa:th waldira:sa:t ʔanna ildaʿm ilnafsi: yarfaʿ nisbat ilshifa:ʔ wa ʔanna ilḥa:lah ilnafsiyyah ilqawiyyah laha: taʔthi:r kabi:r ʿala taqwiyat jiha:z ilmana:ʿah wa min thamma muqa:wamat hadha ilmaraḍ ilsharis*	Many research studies have confirmed that psychological support increases the possibility of recovery and that a strong psychological state has a great effect on strengthening immunity and, hence, resisting this ferocious disease
39	*wala: ʔansa: quwwat ildaʿm illati talaqqaytaha: fi riḥlat ilmaraḍ*	I will not forget the power of support I have received in the journey of the disease
40	*riḥlat ildaʿm ilnafsi: yabdaʔ bizarʿ ilquwwah ilna:biʿah min ilʔi:ma:n billa:h walqadar khayruhu wa sharruhu thumma ʔiḥtiwa:ʔ ilmari:ḍ ʿa:ṭifiyyan wa musa:nadatihi*	The journey of psychological support starts with planting in the patient the power emanating from the belief in Allah and fate which may bring about either fortunes or misfortunes, then supporting the patient emotionally

ilmaraḍ ilsharis [the ferocious disease] to highlight the difficulty of the battle and, hence, foreground the need for support. Support is also linked with *Journey* metaphors (39 and 40) whereby support is depicted as a kind of sustenance, which makes the journey easier and helps the cancer patient in getting through the associated psychological and physical fatigue. Finally, in 40, support is linked with the representation of cancer as a *Trial by Ordeal* in the sense that others will embrace the patient and help her accept the serious disease as fate.

4.4.2 Difficulty of treatment

The treatment of breast cancer mainly relies on surgery, which may involve the partial or total removal of the breast, scarring and lack of symmetry in the shape of breasts (Crouch and McKenzie 2000), chemotherapy and radiotherapy, which act in a non-specific way and harm both cancerous and healthy cells (Spector 2010, 27) (Table 9).

Cancer treatment is generally linked with the WAR and JOURNEY metaphors since it is usually framed as a part of the doctors' plan in the battle against cancer and is also framed as a kind of journey consisting of stages (45, 46, and 47). Treatment, however, is also framed as a killer (41, 42, and 43). The cruelty of the treatment is emphasised by giving it an agentive position as the cause of death in many cases. Speaking about cancer treatment in the narratives is mainly focused on its side effects and the accompanying pain. The effects of breast cancer treatment and surgery are particularly severe for women since they tend to construct breasts as part of their sexual appeal: one survivor depicts the removal of the breasts as a removal of a woman's femininity and structure (44); and another likens the hair loss, which is a result of chemotherapy, to losing a body part in terms of pain (45). The association of breasts and hair with femininity is emphasised in 44, which depicts the woman as incomplete and losing part of her appeal, and also in 45 which describes hair as the crown of a woman's femininity and part of her identity. The pain accompanying chemotherapy and radiotherapy is emphasised, when the pain of radiotherapy is depicted as setting the body on fire (46), and chemotherapy described as even deadlier (47).

Table 9: Examples of *Difficulty of Treatment Metaphors* in the data

No.	Metaphor	Translation
41	*ilsaraṭa:n la: yaqtul ʔinnama: ilʕila:j ʔaḥya:nan man yaqtul*	Cancer does not kill. Treatment, however, sometimes kills
42	*ilsaraṭa:n waḥdahu laysa qa:tilan ʕila:j ilsaraṭa:n ʔayḍan yuhlik ilbadan kuluh khuṣu:ṣan bilnisbah lilmarʔah*	Cancer on its own is not a killer. Cancer treatment destroys the whole body, particularly in the case of women
43	*ilsaraṭa:n la: yaqtul wa ʔaghlab ilḥa:la:t illati fa:raqat ilḥaya:h ma:tat bisabab qaswat ilʕila:j*	Cancer does not kill and most of the cases, who have lost their lives, died due to the cruelty of the treatment
44	*kayfa limraʔatin ma: ʔan tabturu juzʔan min ʔunu:thatiha: wa tarki:batiha: wa kayfa yumkin lishari:kaha: ʔan yataqabbalaha: na:qiṣah*	How can a woman remove a part of her femininity and her structure? How can her partner accept her after becoming imperfect?
45	*wa laʕalla ʔaqsa: mara:ḥil ilʕila:j ilki:ma:wi: fuqda:n ilshaʕr ta:j ilʔuntha: illadhi taḍaʕahu ʕala raʔsiha: wa yawm badaʔa shaʕr raʔsi: fi ilsuqu:ṭ ʔashʕarani: biʔalam kama: law kuntu ʔafqid juzʔan min jasadi:*	The cruelest stage of chemotherapy is the loss of hair, which is considered the woman's crown. … The day my hair started to fall off, …. I felt pain as if I was losing a part of my body
46	*badaʔat ilkhiṭṭah ilʔakhi:rah wa hiya ilʕila:j ilʔishʕa:ʕi: wa badaʔa jasadi: bilʔiḥtira:q*	The final treatment plan, radiotherapy, has started. …and my body was set on fire
47	*faḍṭarra ilʔatibba:ʔ ʔila iltasri:ʕ biʔiʕṭa:ʔi: nawʕan ʔa:khar min ilki:ma:wi: ka:na ʔashad fatkan*	Doctors had to hasten to give me another kind of chemotherapy, and it was deadlier

4.5 Other framings of cancer

4.5.1 Transformation of character

English post-cancer discourse is generally characterised by changes in the survivors' sense of life priorities and values. In this discourse, cancer itself tends to be framed as a vehicle affording positive change in a patient's self-perspective and re-evaluation of his/her priorities and values. This is found to be the case in our Arabic data (Table 10).

The experience of breast cancer, though a traumatic event, is acknowledged as something that can afford a change in the patient's self-perception through constructing a positive post-cancer identity. In our data, patients construct themselves as stronger after cancer and cancer itself as a traumatic event that does not hinder future life (48–55). They agree on having developed a more positive attitude towards life generally. Some even go further by constructing what Hozman (2005, 39) calls an "upbeat and grateful image": they take up an agent subject position in life after cancer by "giving back," through participating in cancer-related activities and helping other cancer patients (48 and 50). There is also a greater sense of appreciation of life after the cancer experience (51), whereby one survivor states that after cancer she has become more loving of life. The sense of cancer as a *Trial by Ordeal* is evoked when a patient constructs cancer as a wake-up call that provided her with time to re-evaluate her life, and become a better Muslim through performing more prayers, charity, and worshipping (55). The use of the collective pronouns "us" and "our" in this example tend to generalise this view for all cancer-patients/survivors, which is compatible with strongly-held beliefs in Islamic culture.

Table 10: Examples of *Transformation of Character* in the data

No.	Metaphor	Translation
48	*wa shufi:t tama:man wa ḥa:liyan ʔaʕi:sh ḥaya:ti: bishakl ṭabiʕi: lakin <u>biru:ḥ ʔukhra: qawiyyah wa ʔakthar qudrah ʕala ilʕaṭa:ʔ</u>*	I fully recovered and currently I live normally but with a stronger and more giving spirit
49	*ʔaṣbaḥtu <u>ʔakthar ʔi:ja:biyyah</u> fi tazawwuq ʔafḍa:l ʕalla:h wa niʕamihi*	I have become more positive in relishing the blessings of Allah
50	*ʔiṣa:bati: bisaraṭa:n ilthady jaʕalatni: ʔaktasib <u>ʔi:ja:biyyah jadi:dah</u> ḥaythu taḥawwalat ḥaya:ti: <u>ʔila risa:lat ḥub liltawʕiyah bihadha ilmaraḍ</u>*	My affliction with breast cancer led me to acquire a new positivity and my life turned into a mission of love to spread awareness of that disease
51	*ʔuḥibbu ilḥaya:h ʔakthar fi:ma lam tataghayyar shakhṣiyyati: kam<u>a: qad yaḥṣul maʕa ilbaʕḍ bisabab ilmaraḍ faqad ka:na ʔinʕika:s hadhihi iltajribah ʕalayya ʔi:ja:biyyan</u>*	I love life more. My personality has not changed, as is the case with some people, due to the disease. The effect of the experience on me has been positive
52	*tajribati: maʕa ilmaraḍ jaʕalatni: <u>fi ilwaqt nafsih ʔaktashif fi nafsi: quwwah lam ʔakun ʔaʕrif ʔannaha mawju:dah</u>*	My experience with the disease made me discover in myself a certain power that I never knew of its existence
53	*laqad ghayyaratni: hadhihi iltajribah <u>ʔila ilʔaḥsan</u>*	This experience changed me into a better person
54	*<u>ʕindama: kharajt min ilmustashfa: bithady wa:ḥid kuntu ʔashʕur bilsaʕa:dah</u> liʔannani fakkart waqtaha: ʔannahum ʔistaʔṣalu: ilsaraṭa:n ʕawaḍan ʕan iltafki:r ʔannahum ʔistaʔṣalu: thadyi:*	When I left the hospital with one breast, I was happy. At that time, I was thinking that they have removed cancer instead of thinking that they have removed my breast
55	*ʔaʕṭa:na: ʔalla:h bilmaraḍ fuṣḥah min ilʕumr liʔiʕa:dat ḥisa:ba:tina: wa taqyi:m ḥaya:tina: wa hadhihi fuṣḥah lilmura:jaʕah walqurb min ʔalla:h wa ilʔiktha:r min ilṣala:h wa ilṣadaqah wa ilʔadhka:r wa ghayriha:*	Through the disease, Allah granted us an opportunity to reevaluate our lives. It is an opportunity for re-evaluation, approaching Allah, and performing more prayers, charity and worshipping

4.5.2 Trial by ordeal

Cancer is also constructed as a *trial by ordeal* to test one's firm belief in fate. The religious references in our data are established by a kind of *fate discourse*, which positions life as being in the hands of Allah with all the difficulties, misfortunes, fortunes, and successes one faces as destiny. In this discourse, cancer is framed as a "wake-up call" and a "test," which provides the patient the opportunity to re-evaluate her relationship with Allah. As shown in Table 11, cancer is depicted as an ordeal, a test of patience, and a destiny (56, 57, 58, and 59). This metaphor is further extended to depict the test as a sign of love from Allah since the one being tested will be rewarded (60 and 61).

Examples 62–65 depict the ideal way of dealing with a serious or even terminal disease in Islamic culture: one should face the crisis positively, accept one's fate to provide evidence of strong belief, and be patient in order to get rewarded by Allah with a higher rank in heaven.

Table 11: Examples of *Trial by Ordeal Metaphors* in the data

No.	Metaphor	Translation
56	*waʔakhadhtu ʔataḥassas ilkutlah waʔafḥaṣ ilwaram waʔadraktu ʿala ilfawr ʔanna qaḍa:ʔ ʔalla:h qad ḥalla bi:*	I touched the mass and examined the tumour. I immediately realised that I was afflicted by Allah's decree
57	*faḥamadtu ʔalla:h ʔanna ilbala:ʔ ḥalla bi: walaysa biʔaḥadin min ʔusrati:*	I thanked Allah that the ordeal has afflicted me, not a member of my family
58	*ʔinna ʔalla:h ʔikhta:rani: liyakhtabir ṣabri:*	Allah has chosen me to test my patience
59	*ḥaythu ʔistaṭa:ʿu: ʔan yatakayyafu: maʿa maraḍihim wayarḍu:n biqaḍa:ʔ ʔalla:h wa qadarahu*	They managed to adapt to their disease and are satisfied with Allah's decree
60	*ʔinna ʔalla:h ʿindama: yuḥibbu ʔinsa:nan yakhtabiruhu ḥatta yamnaḥahu ilʔajr*	When Allah loves someone, He tests him by ordeals to grant him rewards
61	*ʔinna ilʔibtila:ʔ khi:rah mina ʔalla:h wa ʔinna faraj ʔalla:h qari:b ʔidha: ʔaḥsanna: ilTHan bihi waḥdahu washakarna:h falaqad jaʿalat hadhihi iltajribah ḥaya:ti: basa:ti:n zahr watafa:ʔul wa lam tajʿalha: basa:ti:n shawk wa taḍajjur*	The ordeal is Allah's choice and relief will come to us soon if we trusted in Allah and thanked Him. This experience turned my life into a garden full of flowers and optimism, not thorns and discontent
62	*ʔinna niʿmat ilʔi:ma:n hiya ilbadi:l likul jadi:d fi ʿa:lamina: ilṭibbi: wa tilka hiya ʔakbar ʔi:ja:biyya:t hadhihi ilʔibtila:ʔa:t*	The blessing of faith is the alternative to all the new trends in medicine. It is the most positive thing about these ordeals
63	*linataʿallam maʿan ilʔistithma:r ilʔamthal lilʔibtila:ʔa:t bilʔiktha:r min ildaʿawa:t wa muwa:jahat ilʔazama:t biʔi:ja:biyyat ilmuʔmin*	Let's learn together how to properly benefit from these ordeals through increasing prayers and confronting crises with the positivity of the believer
64	*lakinna talammus ilʔi:ja:biyyah wa ilʔistithma:r ilʔamthal lihadhihi ilmiḥan yajʿal minna: muʔmini:n*	Searching for positive aspects and properly benefitting from these afflictions make us strong believers
65	*ʔiṣbir fahadha raf lildaraja:t ʿinda ʔalla:h tashʿur laḥTHatiha: biḥala:wat ilʔi:ma:n*	Be patient, this is an escalation of your rewards from Allah. It is then that you relish the flavour of faith

5 Conclusion

To the best of our knowledge, this is the first large-scale study of conceptual metaphors in the Arabic-language discourse of breast cancer patients, and also the first investigation of the similarities and differences in the use of metaphors in English and Arabic discourses about cancer. Our study attempted to answer two questions: first, what are the conceptual metaphors identified in the Arabic online narratives of breast cancer patients/survivors? and second, what are the similarities and/or differences between English and Arabic languages with regard to the identified metaphorical concepts? Concerning the first research question, we detected the conceptual metaphors of CANCER IS A WAR and CANCER IS A JOURNEY.

We also noticed a combination of both metaphors, either together or with notions of patients' need for support and difficulty of treatment. In addition, we found framings of cancer as an ordeal destined by Allah and a vehicle that affords patients' positive character transformation. As for the second question, we found a great similarity between English and Arabic discourses about cancer particularly in the predominance of war and journey metaphors and the presence of the *Think Positive* discourse. However, our Arabic-language data differ from the English-language cancer discourse in that the latter currently favours journey metaphors instead of the harsh war metaphors. War metaphors in our data tend to be associated with positive feelings: emphasising the strong spirit of patients and showing them as empowered fighters. Journey metaphors, on the other hand, tended to be associated with negative feelings: focusing mainly on the difficulty of the process. Also, our Arabic language data included stronger religious references which is reflected in the fact that all the cancer patients/survivors who contributed to our data seemed to accept their diagnosis as part of their fate, as destined by Allah.

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